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MESMERISM, SPIRITUALISM

&c.

MESMERISM, SPIRITUALISM, &c.

HISTORICALLY & SCIENTIFICALLY CONSIDERED

BEING TWO LECTURES

DELIVERED AT THE LONDON INSTITUTION

With Preface and Appendix

BY

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PREFACE.

THE recent direction of the public mind to the claims of what is called 'Spiritualism,' partly by the discussion which took place in the Anthropological Section of the British Association at its Meeting in Glasgow, and partly by the Slade prosecution which followed, having led the Directors of the London Institution to invite me to deliver two Lectures on the subject, I consented to do so on the understanding that I should treat it purely in its Historical and Scientific aspects: my purpose being to show, first, the relation of what seems to me essentially an Epidemic Delusion, to Epidemics, more or less similar, which have at different periods taken a strong—though transient—hold on the popular imagination; and secondly, to point out how completely the evidence adduced by the upholders of the system fails to afford a scientific proof of the existence of any new Power or Agency capable of antagonising the action of the known Forces of Nature.

539c

In consequence of many representations made to me that these Lectures might be advantageously brought under the notice of a wider circle than that of their original auditors, I was led to prepare them for publication in *Fraser's Magazine*, with the addition of passages which want of time prevented me from including in their oral delivery. And in now reproducing them in a separate form, with an Appendix of *pièces justificatives*, I have no other motive than a desire to do what I can to save from this new form of Epidemic Delusion some who are in danger of being smitten by its poison, and to afford to such as desire to keep themselves clear from it, a justification for their 'common sense' rejection of testimony pressed upon them by friends whose honesty they would not for a moment call in question. Among these *pièces*, there are none which seem to me of more value than the extracts I have given from the writings (long out of print) of the late Mr. Braid; whose experiments, which I repeatedly witnessed, not only contributed essentially to the elucidation of what is real in the phenomena of Mesmerism and the states allied to it, but furnished (by anticipation) the clue to the explanation of many of the curious psychical phenomena of *honest* Spiritualism.

In the discussion to which I have just referred, Mr. A. R. Wallace, speaking from the Chair of the Anthropological Section, addressed me in the follow-

ing words:—'You expect us to believe what *you* say, 'but you will not believe what *we* say.' And the same distinguished Naturalist has since publicly accused me of 'habitually giving only one side of the 'question, and completely ignoring all facts which tell 'against [my] theory.'—The reader of these Lectures will see that my whole aim is to discover, on the generally accepted principles of Testimony, what *are* facts; and to discriminate between facts and the inferences drawn from them. I have no other 'theory' to support, than that of the constancy of the well-ascertained Laws of Nature; and my contention is, that where apparent departures from them take place through Human instrumentality, we are justified in assuming in the first instance either *fraudulent* deception, or unintentional *self*-deception, or both combined,—until the absence of either shall have been proved by every conceivable test that the sagacity of sceptical experts can devise.

The two different modes in which Spiritualists and their opponents view the same facts, according to their respective predispositions, is well brought out in cases of the so-called 'materialization.'—A party being assembled in a front drawing-room, the 'medium' retires into a back room separated from it by curtains, and professes there to go into a trance. After a short interval, during which the lights are turned down so as to make 'darkness visible,' a figure dressed in some strange guise enters between the curtains, and dis-

plays itself to the spectators as an 'embodied spirit.' Precluded from any direct interference with the performance, a sceptic among the company slyly puts some ink on his fingers, and, whilst this is still wet, grasps the 'spirit-hand,' which he finds very like a mortal one. The 'spirit' withdraws behind the curtains, after a short interval the lights are raised, and the 'medium' returns to the company *in propriâ personâ*. The sceptic then points out inkstains on one of the 'medium's' hands, and tells what he has done.

These are the *facts* of the case.—Now, the 'common-sense' interpretation of these facts is, that the 'medium' is a cheat, and the 'embodied spirit' a vulgar ghost personated by him; and until adequate proof shall have been given to the contrary, I maintain that we are perfectly justified in holding to this interpretation, confirmed as it is by the exposure of the trick in every instance in which adequate means have been taken for its detection.

But the explanation of his inked fingers given by the 'medium' is, that the impress made on the hand of the 'embodied spirit' has been transferred 'according to a well-known law of Spiritualism' to his own; and this assumption is regarded as more probable, by such as have accepted the system, than that their pet 'medium' is a cheat, and their belief in him a delusion!

That such an assumption should not only gain

the acceptance of minds otherwise rational, but should be stoutly upheld by them with unquestioning faith, seems to me a striking exemplification of the strength of the hold which a 'dominant idea' may gain, when once the protective safeguard of 'common sense' has been weakly abandoned. And I would further deduce from it the educational importance of that *early* Scientific training, of which a disciplined and trustworthy judgment on such subjects is one of the most valuable resultants. For that training—which essentially consists in the formation of habits of accurate observation, and of correct reasoning upon the facts so learned—pervades the *whole* mind, and shapes its general forms of thought in a degree which is rarely (if ever) equalled by the direction of its powers at a later period of life to the culture of some limited field of scientific investigation. Any such specialization leaves the wide domain of thought which lies outside, untouched by scientific influences; and thus it happens that men who achieve high distinction in particular lines of scientific enquiry, may not only have no special competence for the pursuit of an enquiry of a totally different kind, but may be absolutely *dis*-qualified, by preformed tendencies, for its thorough and impartial prosecution. A remarkable case of this kind, incidentally noticed in the following pages (pp. 7 and 69), I have elsewhere more fully discussed.[1]

[1] 'The Radiometer and its Lessons,' in the *Nineteenth Century* for March 1877.

CONTENTS.

LECTURE I.

INTRODUCTION—

Epidemic Delusions generally 1

MESMERISM—

Mesmer's own System 9
Report of the French Academic Commission . . 11
Mesmeric Somnambulism 13
Mr. Braid's Hypnotism 16
Miss Martineau's J—— 20
Supposed Agency of 'Silent Will' 22
Influence of Expectancy 25

ODYLISM—

Von Reichenbach's Doctrine 29
Explanation of Odylic Phenomena afforded by Mr. Braid's Experiments 33

ELECTRO-BIOLOGY—

Phenomena of this state all referrible to Dominant Ideas 35
Their relation to Spiritualistic Phenomena . . 40

PENDULE EXPLORATEUR—

PAGE

Chevreul's Investigations 41
Supposed Odylic Agency disproved . . . 43
Rutter's Odometer 44

DIVINING ROD—

Supposed Discovery of Water-springs and Metallic veins 47
Experiments of MM. Chevreul and Biot . . . 48
Dr. Beard's Test Experiment 49
Mr. Dilke's Test Experiment 50
Various Applications of Rhabdomancy . . . 51

THOUGHT-READING—

Expression by Unconscious Muscular Action . . 53

LECTURE II.

INTRODUCTION—

Credibility of Testimony 56
Common-sense Test 58
Witch-persecutions 61
Credibility of Scientific Testimony 66
Snail Telegraph 68
Mr. Crookes's Radiometer 69

MESMERIC CLAIRVOYANCE—

Investigation by French Academy of Medicine . 71
Dr. Forbes's Examination of Alexis and Adolphe . 77
Mr. Braid's Examination of Mdlle. Bernard . . 81
Dr. Forbes's Detection of George Goble . . . 85
Detection of Mr. Hewes' 'Jack' at Manchester . 87
Untrustworthiness of Professor Gregory's Testimony. 90
Mental Travelling 93
Dr. Forbes's Exposure of Miss Martineau's J—— . 95

TABLE-TURNING AND TABLE-TALKING—

PAGE

Nature of the Movements 97
Their Source, proved by Faraday's 'Indicator' . . 98

SPIRITUALISM—

Outbreak of the Epidemic 101
Explanation of the Rappings 102
Mrs. Hayden in England 103
Higher Phenomena of Spiritualism 105
Frauds of Professional Mediums 108
Tricks of Non-professionals 109
Self-Deception 110
Fallacies of Memory 111
Influence of Expectancy 112
Trustworthiness of Common Sense 113
Possession by Dominant Ideas 115

APPENDICES.

A. Magic and Demoniacal Agency at the Christian Era . 117

B. Flagellant Mania 119

C. Dancing Mania 122

D. Animal Magnetism of Mesmer 124

E. Academic Report on Mesmer's Pretensions . . 125

F. Extraordinary Muscular Energy producible by Mental Concentration 128

G. Examination of Mr. Lewis's Pretensions at Aberdeen. 129

PAGE

H. Mr. Braid's Disproof of Supposed Influence of Magnets on Mesmerised Subjects . . . 131

I. Mr. Braid's Experiments on Subjective Sensations 134

K. Ancient Use of the Pendule Explorateur . . . 139

L. Table-talking and Planchette-writing 139
Reproduction of Unremembered Ideas . . . 143

M. Supposed Diabolic Manifestations 145

N. Mrs. Norman Culver's Affidavit respecting the Sisters Fox 150

O. Mr. A. R. Wallace's defence of Mrs. Hayden . . 153

P. Mr. Foster's Performances tested 154

Q. Mr. Braid on the Influence of Suggestion and Expectancy 157

MESMERISM, SPIRITUALISM, &c.[1]

LECTURE I.

THE aphorism that 'History repeats itself' is in no case more true than in regard to the subject on which I am now to address you. For there has been a continuity from the very earliest times of a belief, more or less general, in the existence of 'occult' agencies capable of manifesting themselves in the production of mysterious phenomena of which ordinary experience does not furnish the *rationale*. And while this very continuity is maintained by some to be an evidence of the real existence of such agencies, it will be my purpose to show you that it proves nothing more than the wide-spread diffusion, alike among minds of the highest and of the lowest culture, of certain tendencies to thought, which have either created ideal marvels possessing no foundation what-

[1] The Lectures, as here presented, include several passages which were necessarily omitted in delivery.

ever in fact, or have, by exaggeration and distortion, invested with a preternatural character occurrences which are perfectly capable of a natural explanation. Thus, to go no further back than the first century of the Christian era, we find the most wonderful narrations, alike in the writings of Pagan and of Christian historians, of the doings of the Eastern 'sorcerers' and Jewish 'exorcists' who had spread themselves over the Roman Empire.[1] Among these, the Simon Magus slightly mentioned in the Book of Acts was one of the most conspicuous; being recorded to have gained so great a repute for his 'magic arts,' as to have been summoned to Rome by Nero to exhibit them before him; and a Christian Father goes on to tell how, when Simon was borne aloft through the air in a winged chariot, in the sight of the Emperor, the united prayers of the Apostles Peter and Paul, prevailing over the demoniacal agencies that sustained him, brought him precipitately to the ground. So, in our own day, not only are we seriously assured by a nobleman of high scientific attainments, that he himself saw Mr. Home sailing in the air (by moonlight) out of one window and in at another, at a height of seventy feet from the ground; but eleven persons unite in declaring that Mrs. Guppy was not only conveyed through the air in a trance all the way from Highbury Park to Lamb's Conduit Street, but was brought by invisible agency into a room of which the doors and windows were closed and fastened, coming 'plump down' in a state of complete unconsciousness

[1] *Appendix A.*

and partial *déshabille* upon a table round which they were sitting in the dark, shoulder to shoulder.

Of course, if you accept the testimony of these witnesses to the aerial flights of Mr. Home and Mrs. Guppy, you can have no reason whatever for refusing credit to the historic evidence of the demoniacal elevation of Simon Magus, and the victory obtained over his demons by the two Apostles. And you are still more bound to accept the solemnly attested proofs recorded in the proceedings of our Law Courts within the last two hundred years, of the aerial transport of witches to attend their demoniacal festivities: the belief in Witchcraft being then accepted not only by the ignorant vulgar, but by some of the wisest men of the time, such as Lord Bacon and Sir Matthew Hale, Bishop Jewell and Richard Baxter, Sir Thomas Browne and Addison; while the denial of it was considered as virtual Atheism.

The general progress of Rationalism, however, as Mr. Lecky has well shown, has changed all this; and to accept any of these marvels, we must place ourselves in the mental attitude of the narrator of Mrs. Guppy's flight; who glories in being so completely unfettered by scientific prejudices, as to be free to swallow anything, however preposterous and impossible in the estimation of scientific men, that his belief in 'spiritual' agencies may lead him to expect as probable.

If time permitted, it would be my endeavour to show you by a historical examination of these marvels, that there has been a long succession of epidemic

Delusions, the form of which has changed from time to time, whilst their essential nature has remained the same throughout; and that the condition which underlies them all is *the subjection of the mind to a dominant idea.* There is a constitutional tendency in many minds to be seized by some strange notion which takes entire possession of them; so that all the actions of the individual thus 'possessed' are results of its operation. This notion may be of a nature purely intellectual, or it may be one that strongly interests the feelings. It may be confined to a small group of individuals, or it may spread through vast multitudes. Such delusions are most tyrannous and most liable to spread, when connected with religious enthusiasm; as we see in the flagellant and dancing manias of the Middle Ages;[1] the supposed Demoniacal possession that afterwards became common in the nunneries of France and Germany; the ecstatic revelations of Catholic and Protestant visionaries; the strange performances of the *Convulsionnaires* of St. Médard, which have been since almost paralleled at Methodist 'revivals' and camp-meetings; the preaching epidemic of Lutheran Sweden; and many other outbreaks of a nature more or less similar. But it is characteristic of some of the later forms of these epidemic delusions, that they have connected themselves rather with Science than with Religion. In fact, just as the performances of Eastern Magi took the strongest hold of the Roman mind, when its faith in its old religious beliefs was shaken to its foundations, so did

[1] *Appendices, B, C.*

the grandiose pretensions of Mesmer,—who claimed the discovery of a new Force in Nature, as universal as Gravitation, and more mysterious in its effects than Electricity and Magnetism,—find the most ready welcome among the sceptical votaries of novelty who paved the way for the French Revolution. And this pseudo-scientific idea gave the general direction to the doctrines taught by Mesmer's successors; until in the supposed 'Spiritualistic' manifestations a recurrence to the religious form has taken place, which may (I think) be mainly traced to the emotional longing for some assurance of the continued existence of departed friends, and hence of our own future existence, which the intellectual loosening of time-honoured beliefs as to the Immortality of the Soul has brought into doubt with many.

I must limit myself, however, to the later phase of this history; and shall endeavour to show you how completely the extravagant pretensions of Mesmerism and Odylism have been disproved by scientific investigation: all that is genuine in their phenomena having been accounted for by well-ascertained Physiological principles; while the evidence of their higher marvels has invariably broken down, when submitted to the searching tests imposed by the trained 'experts' whom I maintain to be alone qualified to pronounce judgment upon such matters.

Nothing is more common than to hear it asserted that these are subjects which any person of ordinary intelligence can investigate for himself. But the Chemist and the Physicist would most assuredly

demur to any such assumption in regard to a chemical or physical enquiry; the Physiologist and Geologist would make the same protest against the judgment of unskilled persons in questions of physiology and geology. And a study of Mesmerism, Odylism, and Spiritualism extending over more than forty years, may be thought to justify me in contending that a knowledge of the physiology and pathology of the Human Organism—corporeal and mental—of the strange phenomena which are due to the Physical excitability of the Nervous System, of the yet stranger results, the possession of the Mind by dominant emotions or ideas, of its extraordinary tendency to self-deception in regard to matters in which the feelings are interested, of its liability to place undue confidence in persons having an interest in deceiving, and of the modes in which fallacies are best to be detected and frauds exposed, is an indispensable qualification both for the discrimination of the genuine from the false, and for the reduction of the genuine to its true shape and proportions.

I hold, further, not only that it is quite legitimate for the enquirer to enter upon this study with that 'prepossession' in favour of the ascertained and universally admitted Laws of Nature, which believers in Spiritualism make it a reproach against men of science that they entertain; but that experience proves that a prepossession in favour of some 'occult' agency is almost sure to lead the investigator to the too ready acceptance of evidence of its operation I would be among the last to affirm that there is not 'much more

in heaven and earth than is dreamt of in our philosophy;' and would be as ready as anyone to welcome any addition to our real knowledge of the great Agencies of Nature. But my contention is that no new principle of action has any claim to scientific acceptance, save after an exhaustive enquiry as to the extent to which the phenomena can be accounted for, either certainly or probably, by agencies already known; an enquiry which only 'experts' in those departments of science which deal with such agencies are competent to carry out. The assumption of a new agency, and the interpretation of phenomena in accordance with it, is a method which has proved so deceptive as to be now universally abandoned by men of truly philosophical habits of thought; being only practised by such as surrender their common sense to a 'dominant idea,' and deem nothing incredible which accords with their 'prepossession.'

The recent history of Mr. Crooke's most admirable invention, the Radiometer, is pregnant with lessons on this point. When this was first exhibited to the admiring gaze of the large body of scientific men assembled at the soirée of the Royal Society, there was probably no one who was not ready to believe with its inventor that the driving round of its vanes was effected by the direct mechanical agency of that mode of Radiant Force which we call Light; and the eminent Physicists in whose judgment the greatest confidence was placed, seemed to have no doubt that this mechanical agency was something outside Optics properly so called, and was, in fact, if not a new Force

in Nature, a new *modus operandi* of a Force previously known under another form. There was here, then, a perfect readiness to admit a novelty which seemed so unmistakably demonstrated, though transcending all previous experience. But after some little time the question was raised whether the effect was not really due to an intermediate action of that *mode* of Radiant force which we call *Heat*, upon the attenuated vapour of which it was impossible entirely to get rid; and the result of a most careful and elaborate experimental enquiry, in which nature has been put to the question in every conceivable mode, has been to make it (I believe) almost if not quite certain that the first view was incorrect, and that Heat is the real moving power, acting under peculiar conditions, but in no new mode.

No examination of the phenomena of Spiritualism can give the least satisfaction to the mind trained in philosophical habits of thought, unless it shall have been, in its way, as searching and complete as this. And when scientific men are invited to dark *séances*, or are admitted only under the condition that they shall merely look on and not enquire too closely, they feel that the matter is one with which they are entirely precluded from dealing. When, again, having seen what appears to them to present the character of a very transparent conjuring trick, they ask for a repetition of it under test conditions admitted to be fair, their usual experience is that they wait in vain (for hours it may be) for such repetition, and are then told that they have brought an 'atmosphere of incredulity' with them, which prevents the manifestation.—Now

I by no means affirm that the claims of Spiritualism are *dis*proved by these failures; but I do contend that until the evidence advanced by believers in those claims has stood the test of the same sifting and cross-examination by sceptical experts, that would be applied in the case of any other scientific enquiry, it has no claim upon general acceptance; and I shall now proceed to justify that contention by an appeal to the history of previous enquiries of the like kind.

MESMERISM.

It was about the year 1772, that Mesmer, who had previously published a dissertation *On the Influence of the Planets on the Human Body*, announced his discovery of a universal fluid, 'the immediate agent of all the phenomena of nature, in which life originates, and by which it is preserved;' and asserted that he had further discovered the power of regulating the operations of this fluid, to guide its current in healthy channels, and to obliterate by its means the tracks of disease. This power he in the first instance professed to guide by the use of magnets; but having quarrelled with Father Hell, a professor of astronomy at Vienna, who had furnished him with the magnets with which he made his experiments, and who then claimed the discovery of their curative agency, Mesmer went on to assert that he could concentrate the power in, and liberate it from, any substance he pleased, could charge jars with it (as with electricity) and discharge them at his pleasure, and could cure by its means

the most intractable diseases.[1] Having created a great sensation in Bavaria and Switzerland by his mysterious manipulations, and by the novel effects which they often produced, Mesmer returned to Vienna, and undertook to cure of complete blindness a celebrated singer Mdlle. Paradis, who had been for ten years unsuccessfully treated by the court physician. His claim to a partial success, however, which was in the first instance supported by his patient, seemed to have been afterwards so completely disproved by careful trials of her visual powers, that he found himself obliged to quit Vienna abruptly; and he thence proceeded to Paris, where he soon produced a great sensation. The state of French society at that time, as I have already remarked, was peculiarly favourable to his pretensions. A feverish excitability prevailed, which caused the public mind to be violently agitated by every question it took up. And Mesmer soon found it advantageous to challenge the Learned Societies of the capital to enter the lists against him; the storm of opposition which he thus provoked having the effect of bringing over to his side a large number of devoted disciples and ardent partisans. He professed to distribute the magnetic fluid to his congregated patients, from a *baquet* or magnetic tub which he had impregnated with it, each individual holding a rod which proceeded from the *baquet*; but when the case was particularly interesting, or likely to be particularly profitable, he took it in hand for personal magnetisation. All the surroundings were

[1] *Appendix D.*

such as to favour, in the hysterical subjects who constituted the great bulk of his patients, the nervous paroxysm termed the 'crisis,' which was at once recognised by medical men as only a modified form of what is commonly known as a 'hysteric fit;' and the influence of the 'imitative' tendency was strongly manifested just as in cases where such fits run through a school, nunnery, factory, or revivalist meeting, ir which a number of suitable subjects are collectec together. And it was chiefly on account of the moral disorders to which Mesmer's proceedings seemed likely to give rise, that the French Government directed a Scientific Commission, including the most eminent *savans* of the time—such as Lavoisier, Bailly, and Benjamin Franklin—to enquire into them. After careful investigation they came to the conclusion that there was no evidence whatever of any special agency proceeding from the *baquet*; for not only were they unable to detect the passage of any influence from it, that was appreciable, either by electric, magnetic, or chemical tests, or by the evidence of any of their senses; but on blindfolding those who seemed to be most susceptible to its supposed influence, all its ordinary effects were produced when they were without any connection with it, *but believed that it existed.* And so, when in a garden of which certain trees had been magnetised, the patients, either when blindfolded, or when ignorant which trees had been magnetised, would be thrown into a convulsive fit if they believed themselves to be near a magnetised tree,

but were really at a distance from it; whilst, conversely, no effect would follow their close proximity to one of these trees, while they believed themselves to be at a distance from any of them. Further, the Commissioners reported that, although some cures might be wrought by the Mesmeric treatment, it was not without danger, since the convulsions excited were often violent and exceedingly apt to spread, especially among men feeble in body and weak in mind, and almost universally among women; and they dwelt strongly also on the moral dangers which, as their enquiries showed, attended these practices.[1]

Now this Report, although referring to a form of Mesmeric procedure which has long since passed into disrepute, really deals with what I hold to be an important principle of action, which, long vaguely recognised under the term 'imagination,' now takes a definite rank in Physiological science;—namely, that in individuals of that excitable nervous temperament which is known as 'hysterical' (a temperament by no means confined to women, but rare in healthy and vigorous men), the *expectation* of a certain result is often sufficient to evoke it. Of the influence of this 'expectancy' in producing most remarkable changes in the bodily organism, either curative or morbid, the history of Medicine affords abundant and varied illustrations; I shall presently show you that it can generate *sensations* of a great variety of kinds; and I shall further prove that it operates no less remarkably in calling forth *movements*, which, not being

[1] *Appendix E.*

consciously directed by the person who executes them, have been attributed to hypothetical 'occult' agencies.

I shall not trace the further history of Mesmer, or of the system advocated by himself; contenting myself with one ludicrous example of the absurdity of his pretensions. When asked in his old age by one of his disciples, why he ordered his patients to bathe in river-water in preference to well-water, he replied that it was because river-water is exposed to the sun's rays; and when further asked how these affected it in any other way than by the warmth they excited, he replied, "Dear doctor, the reason why all water ex- "posed to the rays of the sun is superior to all other "water, is because it is magnetised—since twenty years "ago *I magnetised the sun!*"

In the hands of some of his pupils, however, Animal Magnetism, or Mesmerism (as it gradually came to be generally called), assumed an entirely new development. It was discovered by the Marquis de Puysegur,—a great landed proprietor, who appears to have practised the art most disinterestedly for the sole benefit of his tenantry and poor neighbours,—that a state of profound insensibility might be induced by very simple methods in some individuals, and a state akin to somnambulism in others; and this discovery was taken up and brought into vogue by numerous mesmerisers in France and Germany, while, during the long Continental war and for some time afterwards, it remained almost unknown in England. Attention seems to have been first drawn to it

in this country by the publication of the account of a severe operation performed in 1829 by M. Cloquet, one of the most eminent surgeons of Paris, on a female patient who had been thrown by mesmerism into a state of somnambulism ; in which, though able to converse with those around her, she showed herself entirely insensible to pain, whilst of all that took place in it she had subsequently no recollection whatever. About twelve years afterwards, two amputations were performed in our country, one in Nottinghamshire, and the other in Leicestershire, upon mesmerised patients, who showed no other sign of consciousness than an almost inaudible moaning ; both of them exhibiting an uninterrupted placidity of countenance, and declaring, when brought back to their ordinary state, that they were utterly unaware of what had been done to them during their sleep. And not long afterwards, Dr. Esdaile, a surgeon in Calcutta, gave details of numerous most severe and tedious operations performed by him, without the infliction of pain, upon natives in whom he had induced the mesmeric sleep ; the rank of Presidency Surgeon being conferred upon him by Lord Dalhousie (then Governor-General of India), 'in acknowledgment of the services he had "rendered to humanity." The results of minor experiments performed by various persons desirous of testing the reality of this state, were quite in harmony with these. Writing in 1845, Dr. Noble, of Manchester with whom I was early brought into association by Sir John Forbes in the pursuit of this enquiry,) said :

"We have seen a needle thrust deeply under the

nail of a woman sleeping mesmerically, without its exciting a quiver; we have seen pungent snuff in large quantities passed up the nostrils under the same circumstances, without any sneezing being produced until the patient was roused, many minutes afterwards: we have noticed an immunity from all shock when percussion caps have been discharged suddenly and loudly close to the ear; and we have observed a patient's little finger in the flame of a candle, and yet no indication of pain. In this latter case all idea of there having been courageous dissimulation was removed from our mind, in seeing the same patient evince both surprise and indignation at the treatment received; as, from particular circumstances, a substantial inconvenience was to result from the injury to the finger, which was by no means slight." [1]

This 'mesmeric sleep' corresponds precisely in character with what is known in medicine as 'hysteric coma;' the insensibility being as profound, while it lasts, as in the coma of narcotic poisoning or pressure on the brain; but coming on and passing off with such suddenness as to show that it is dependent upon some transient condition of the sensorium, which, with our present knowledge, we can pretty certainly assign to a reduction in the supply of blood caused by a sort of spasmodic contraction of the blood-vessels. That there is no adequate ground for regarding it as otherwise than *real*, appears further from the discovery made not long afterwards by Mr. Braid, a surgeon practising at Manchester, that he could induce it by a

[1] *British and Foreign Medical Review*, April 1845.

very simple method, which is not only even more effective than the 'passes' of the mesmeriser, but is moreover quite independent of any other will than that of the person who subjects himself to it. He found that this state (which he designated as Hypnotism) could be induced in a large proportion of individuals of either sex, and of all ranks, ages, and temperaments, who determinately fix their gaze for several minutes consecutively on an object brought so near to their eyes, as to require a degree of convergence of their axes that is maintainable only by a strong effort.[1]

The first state thus induced is usually one of profound comatose sleep; the 'subject' not being capable of being roused by sensory impressions of any ordinary kind, and bearing without the least indication of consciousness what would ordinarily produce intolerable uneasiness or even severe pain. But after some little time, this state very commonly passes into one of somnambulism, which again corresponds

[1] Mr. Braid's peculiar success in inducing this state seemed to depend partly upon his mode of working his method, and partly upon the 'expectancy' of his subjects. Finding a bright object preferable, he usually employed his silver lancet-case, which he held in the first place at ordinary reading distance, rather above the plane of the eyes; he then slowly approximated it towards the middle point, a little above the bridge of the nose, keeping his own eyes steadily fixed upon those of his 'subject,' and watching carefully the direction of their axes. If he perceived their convergence to be at all relaxed, he withdrew the object until the axes were both again directed to it; and then again approximated it as closely as was compatible with their continued convergence. When this could be maintained for a sufficient length of time upon an object at no more than about three inches distance, the comatose state generally supervened.

closely on the one hand with *natural*, and on the other with *mesmeric* somnambulism. In fact, it has been by the study of the Somnambulism artificially induced by Mr. Braid's process, that the essential nature of this condition has been elucidated, and that a scientific *rationale* can now be given of a large proportion of the phenomena reported by Mesmerisers as having been presented by their somnambules.

It has been claimed for certain Mesmeric somnambules, however, that they occasionally possess an intelligence altogether superhuman as to things present, past, and future, which has received the designation 'lucidity;' and it is contended that the testimony on which we accept the reality of phenomena which are conformable to our scientific experience, ought to satisfy us equally as to the genuineness of those designated as 'the higher,' which not only transcend, but absolutely contradict, what the mass of enlightened men would regard as universal experience. This contention, however, seems to me to rest upon an entirely incorrect appreciation of the probative force of evidence; for, as I shall endeavour to prove to you in my succeeding lecture, the only secure basis for our belief on *any* subject, is the confirmation afforded to external testimony by our sense of the inherent probability of the fact testified to; so that, as has been well remarked, "evidence tendered in support of what "is new must correspond in strength with the degree "of its incompatibility with doctrines generally admitted "as true; and, where statements obviously contravene "all past experience and the universal consent of man-

"kind, any evidence is inadequate to the proof, which "is not complete, beyond suspicion, and absolutely in- "capable of being explained away."

Putting aside for the present the discussion of these asserted marvels, I shall try to set before you briefly the essential characters which distinguish the state of Somnambulism (whether natural or induced), on the one hand from dreaming, and on the other from the ordinary waking condition. As in both these, the mind is in a state of activity; but, as in dreaming, its activity is free from that controlling power of the will, by which it is directed in the waking state; and is also removed from this last by the complete ignorance of all that has passed in it, which is manifested by the 'subject' when called back to his waking self,—although the events of one access of this 'second consciousness' may vividly present themselves in the next, as if they had happened only just before. Again, instead of all the senses being shut up, as in ordinary dreaming sleep, some of them are not only awake, but preternaturally impressible; so that the course of the somnambulist's thought may be completely directed by suggestions of any kind that can be conveyed from without through the sense-channels which still remain open. But further, while the mind of the ordinary dreamer can no more produce movements in his body than impressions on his sense-organs can affect his mind, that of the Somnambulist retains full direction of his body (in so far, at least, as his senses serve to guide its movements); so that he *acts* his dreams as if they were his waking

thoughts. The mesmerised or hypnotised Somnambule may, in fact, be characterised as a *conscious automaton*, which, by appropriate suggestions, may be made to think, feel, say, or do almost anything that its director wills it to think, feel, say, or do; with this remarkable peculiarity, that its whole power seems concentrated upon the state of activity in which it is at each moment, so that every faculty it is capable of exerting may become extraordinarily intensified. Thus, while vision is usually suspended, the senses of hearing, smell, and touch, with the muscular sense, are often preternaturally acute; in consequence, it would seem, of the undistracted concentration of the attention on their indications. I could give you many curious instances of this, which I have myself witnessed; as also of the great exertion of muscular power by subjects of extremely feeble *physique*:[1] but as they are all obviously referrible to this one simple principle, I need not dwell on their details, preferring to narrate one which I did not myself witness, but which was reported to me on most trustworthy authority, of a remarkable manifestation of a power of imitative vocalisation that is ordinarily attainable only after long practice. When Jenny Lind was singing at Manchester, she was invited by Mr. Braid to hear the performances of one of his hypnotised subjects, an illiterate factory girl, who had an excellent voice and ear, but whose musical powers had received scarcely any cultivation. This girl in the hypnotic state followed the Swedish nightingale's songs in different

[1] *Appendix F.*

languages both instantaneously and correctly; and when, in order to test her powers, Mdlle. Lind extemporised a long and elaborate chromatic exercise, she imitated this with no less precision, though unable in her waking state even to attempt anything of the sort. "She caught the sounds so promptly," says Mr. Braid, "and gave both words and music so simultaneously "and correctly, that several persons present could not "discriminate whether there were two voices or only "one."

Now I wish you to compare this case with another, which was reported about the same time upon what seemed equally unexceptionable testimony. When Miss Martineau first avowed her conversion to Mesmerism, the extraordinary performances of her servant J—— were much talked of; and among other marvels it was asserted that she could converse, when in her mesmeric state, in languages she had never learned, and of which she knew nothing when awake; the particular fact being explicitly stated, that Lord Morpeth had tested this power and had found it real. You will readily perceive that supposing the testimony in this case to have been exactly the same as in the preceding, its probative force would have been very different. For the first of them, though unprecedented, presented no scientific improbability to those who were prepared by their careful study of the phenomena of Hypnotism, to believe that the power of imitative vocalisation, like any other, might be intensified by the concentration of the somnabule's whole attention upon the performance. But it seemed

inconceivable that an uneducated servant girl could understand what was said to her in a language she had never learned; still more, that she should be able to reply in the same language. And the only rational explanation of the fact, *if fact it was*, short of a miracle, must have lain, either in her having learned the language long before and subsequently forgotten it, or in her being able by 'thought-reading' (which is maintained by some, even at the present time, to be one of the attributes of the mesmeric state) to divine and express the answer expected by Lord Morpeth. But the marvel was entirely dissipated by the enquiries of Dr. Noble; who, being very desirous of getting at the exact truth, first applied for information to a near relative of Miss Martineau, and was told by him that the report was not quite accurate, for that on Lord Morpeth putting a question to J—— in a foreign language, J—— had replied appropriately in her own vernacular. Her comprehension of Lord Morpeth's question, however, appeared in itself sufficiently strange to be suggestive of some fallacy; and having an opportunity, not long afterwards, of asking Lord Morpeth himself what was the real state of the case, Dr. Noble learned from him that when he put a question to J—— in a foreign language, she imitated his speech after a fashion by an unmeaning articulation of sound.

On the lesson which this case affords as to the credibility of testimony in regard to what are called the 'higher phenomena' of Mesmerism, I shall enlarge in my succeeding lecture; and at present I shall only remark that it was shown by careful comparison

between the phenomena displayed by the same individuals, when 'mesmerised' in the ordinary way, and 'hypnotised' by Mr. Braid's process, that there was no other difference between the two states, than that arising from the special *rapport* between the mesmeriser and his 'subject'; and that this was clearly explicable by the 'expectancy' under which the 'subject' passed into the state of second consciousness. For Mr. Braid found himself able, by assuring his 'subjects' during the induction of the coma that they would hear the voice of one particular person and no other, to establish this *rapport* with any person he might choose: the case being strictly analogous to the awaking of the telegraph-clerk by the clicking of his needles, of the doctor by his night-bell, or of the mother by her infant's cry, though all would sleep soundly through far louder noises to which they felt no call to attend. And thus, as was pointed out long since by Dr. Noble and myself, not only may the general reality of the Mesmeric Somnambulism be fully admitted, but a scientific *rationale* may be found for its supposed distinctive peculiarities, without the assumption of any special 'magnetic' or 'mesmeric' agency.

It is affirmed, however, that proof of this agency is furnished by the power of the 'silent will' of the Mesmeriser to induce the sleep in subjects who are not in the least aware that it is being exerted, and further, to direct from a distance the actions of the Somnambule. Doubtless, if satisfactory proof of this assertion could be furnished, it would go far to estab-

lish the claim. But nothing is more difficult than to eliminate all sources of fallacy in this matter. For while it is admitted by Mesmerisers that the belief that the influence is being exerted is quite sufficient, in habitual somnambules, to induce the result, it is equally certain that such 'sensitives' are marvellously quick at guessing from slight intimations what is expected to happen. And it has been repeatedly found that mesmerisers who had no hesitation in asserting that they could send particular 'subjects' to sleep, or could affect them in other ways, by an effort of silent will, have utterly failed to do so when these 'subjects' were carefully kept from any suspicion that such will was being exerted. Thus Dr. Noble has recorded the case of a friend of his own, who, believing himself able thus to influence a female servant whom he had repeatedly mesmerised, accepted with the full assurance of confident faith a proposal to make this experiment in Dr. Noble's house instead of his own. The girl, having been sent thither with a note, was told to sit down in Dr. Noble's consulting-room while the answer was being written; her chair being close to a partially-open door, on the other side of which her master, whom she supposed to be elsewhere, had previously taken up his position. Although this gentleman had usually found two or three minutes sufficient to send the girl to sleep, when he was in his own drawing-room and she was in the kitchen, the two being separated by intervening walls and flooring, yet when he put forth his whole force for a quarter of an hour within two feet of her, with only a partially closed

door between them, it was entirely without result; and no other reason for the failure could be assigned than *her entire freedom from expectancy.* So in another case, in which Mr. Lewis (accounted one of the most powerful Mesmerists of his time) undertook to direct the actions of his somnambule in the next room, according to a programme agreed on between himself and one set of witnesses,—whilst the actions actually performed were recorded and timed by another set,—there was found to be so complete a discordance between the programme 'willed' and the actions really executed, as entirely to negative the idea of any dependence of the latter upon the directing power of the mesmeriser.[1] Mr. Lewis was challenged to this test-experiment by Professors of the University of Aberdeen, in consequence of his public assertion that he had repeatedly induced the mesmeric sleep, and had directed the operations of his somnambules, by the exertion of his 'silent will' from a distance. His utter failure to produce either result, however, under the scrutiny of sceptical enquirers, obviously discredits all his previous statements; except to such as (like Mr. A. R. Wallace, who has recently expressed his full faith in Mr. Lewis's self-asserted powers,) are ready to accept without question the slenderest evidence of the greatest marvels. Further, when challenged to give proof before the same Committee, of the power he had publicly claimed of overcoming the force of gravity by raising a man from the ground and keeping him suspended in the air for a short time,

[1] *Appendix G.*

simply by holding his hand above the man's head and willing the result, Mr. Lewis admitted "that he had "no such power, and that he could only influence "a person lying on the ground so as to make him start "up, though others were endeavouring to hold him "down." Now I would ask you to compare this disclaimer, made to a body of sceptical Professors of Aberdeen, whose published report of it was never impugned by Mr. Lewis, with the assertion made to and accepted by Professor Gregory of Edinburgh :— "When Mr. Lewis stood on a chair, and tried to draw "Mr. H., without contact, from the ground, he gradu- "ally rose on tiptoe, making the most violent efforts to "rise, till he was fixed by cataleptic rigidity. Mr. Lewis "said, that had he been still more elevated above Mr. "H., he could have raised him from the floor without "contact, and *held him thus suspended for a short time,* "*while some spectator should pass his hand under his feet.* "Although this was not done in my presence, yet the "attraction upwards was so strong, that *I see no reason* "*to doubt the statement made to me by Mr. Lewis and* "*others who saw it, that this experiment has been success-* "*fully performed.*'[1] One is inclined to say of such pretenders, and of the believers in them, "These be thy gods, O Israel."

A converse experiment performed by Dr. Elliotson himself, satisfied him that 'expectancy' would take the place of what he maintained to be the real Mesmeric influence. Having told one of his *habituées* that he would go into the next room and mesmerise her

[1] *Letters to a Candid Enquirer on Animal Magnetism*, p. 352.

through the door, he retired, shut the door, performed no mesmeric passes, but tried to forget her, walked away from the door, busied himself with something else, and even walked into a third room ; and on returning in less than ten minutes found the girl in her usual sleep-waking condition. The extreme susceptibility of many of these 'sensitive' subjects further accounts for their being affected (without any intentional deceit) by physical impressions which are quite imperceptible to others :—such as slight differences in temperature, when two coins are presented to them, of which one has been held in the hand of the mesmeriser ; or two wine-glasses of water, into one of which he has dipped his finger for a short time. But the *belief* that he has transmitted his influence in any mode is quite sufficient to produce the result ; as was shown in an amusing case recorded by M. Bertrand, whose treatise on *Animal Magnetism* (Paris, 1826) is, by far, the most philosophical work extant on the subject. Having occasion to go a journey of a hundred leagues, leaving a female somnambule under the treatment of one of his friends, M. Bertrand sent him a magnetised letter, which he requested him to place on the stomach of the patient, who had been led to anticipate the expected results ; Mesmeric sleep, with the customary phenomena, supervened. He then wrote another letter which he did *not* magnetise, and sent it to her in the same manner, and with the same intimation. She again fell into the Mesmeric sleep, which was attributed to the letter having been unintentionally impregnated by M. Ber-

trand with the mesmeric fluid while he was writing it. Desiring to test the matter still further, he caused one of his friends to write a similar letter, imitating his handwriting so closely that those who received it should believe it to be his ;—the same effect was once more produced.

And so it was with the large number of experiments that were made within my own knowledge during the twenty years' attention that I gave to this subject, with a view to test the Mesmeriser's power of inducing any of the phenomena of this state without the patient's consciousness. Successes, it is true, were not unfrequent ; but these almost invariably occurred when the experiments were made under conditions to which the parties had become habituated, as in the case of Dr. Noble's friend. For his performances were so continually being repeated to satisfy the curiosity of visitors, that Dr. Noble's call at his house would have been sufficient to excite, on the part of the 'subject,' the expectancy that would have thrown her into the sleep. But when such expectancy was carefully guarded against, the result was so constantly negative, as—I will not say to *disprove* the existence of any special Mesmeric force,—but to neutralise completely the affirmative value of the evidence adduced to *prove* it. For I think you must now agree with me, that, if 'expectancy' alone is competent to produce the results, as admitted by the most intelligent Mesmerisers, nothing but the most rigid exclusion of such expectancy can afford the least ground for the assumption of any other agency. And my own

prolonged study of the subject further justifies me in taking the position, that it is only when the enquiry is directed, and its results recorded, by *sceptical experts*, that such results have the least claim to scientific value. The disposition to overlook sources of fallacy, to magnify trivialities into marvels, to construct circumstantial 'myths' (as in the case of Miss Martineau's J—— and Lord Morpeth) on the slightest foundation of fact, and to allow themselves to be imposed upon by cunning cheats, have been so constantly exhibited by even the most honest believers in the 'occult' power of Mesmerism, as—not only in my own opinion, but in that of my very able allies in this enquiry—to deprive the unconfirmed testimony of any number of such believers, in regard to matters lying beyond scientific experience, of all claim to acceptance. In fact, the positions taken in regard to Mesmerism by my friend Dr. Noble, as far back as 1845,[1] and more fully developed by myself a few years later on the basis of Mr. Braid's experiments and of my own Physiological and Psychological studies,[2] have, not only in our own judgment, but by the general verdict of the Medical and Scientific world, been fully confirmed by the subsequent course of events, the history of which I shall now proceed to sketch.

[1] *British and Foreign Medical Review*, vol. xix.

[2] *Principles of Human Physiology*, 4th edition, 1853; *Quarterly Review*, October, 1853.

ODYLISM.

It was asserted, about thirty years ago, by Baron von Reichenbach,—whose researches on the Chemistry of the Hydrocarbons constitute the foundation of our present knowledge of paraffin and its allied products of the distillation of coal,—that he had found certain 'sensitive' subjects so peculiarly affected by the neighbourhood of Magnets or Crystals, as to justify the assumption of a special polar force which he termed *Odyle*, allied to, but not identical with, Magnetism; present in all material substances, though generally in a less degree than in magnets and crystals; but called into energetic activity by any kind of physical or chemical change, and, therefore, especially abundant in the Human body. Of the existence of this Odylic force, which he identified with the 'animal magnetism' of Mesmer, he found what he maintained to be adequate evidence in the peculiar sensations and attractions experienced by his 'sensitives' when in the neighbourhood either of Magnets or Crystals, or of Human beings specially charged with it. After a magnet had been repeatedly drawn along the arm of one of these 'subjects,' she would feel a pricking, streaming, or shooting sensation; she would smell odours proceeding from it; or she would see a small volcano of flame issuing from its poles, when gazing at them, even in broad daylight. As in the Mesmeric sleep light is often seen by the somnambule to issue from the operator's fingers, so the Odylic light was

discerned in the dark by Von Reichenbach's 'sensitives,' issuing not only from the hands, but from the head, eyes, and mouth of powerful generators of this force. One individual in particular was so peculiarly sensitive, that she saw (in the dark) sparks and flames issuing from ordinary nails and hooks in a wall. It was further affirmed that certain of these 'sensitives' found their hands so powerfully attracted by magnets or crystals, as to be irresistibly drawn towards them; and thus that if the attracting object were forcibly drawn away, not only the hand, but the whole body of the sensitive was dragged after it. Another set of facts was adduced to prove the special relation of Odyle to terrestrial Magnetism,—namely, that many 'sensitives' cannot sleep in beds which lie across the magnetic meridian; a position at right angles to it being to some quite intolerable.

Von Reichenbach's doctrine came before the British public under the authority of the late Dr. Gregory, then Professor of Chemistry in the University of Edinburgh; who went so far as to affirm that "by a "laborious and beautiful investigation, Reichenbach "had demonstrated the existence of a force, influence, "or imponderable fluid—whatever name be given to it— "which is distinct from all the known forces, influences, "or imponderable fluids, such as heat, light, electricity, "magnetism, and from the attractions, such as gravita- "tion, or chemical attraction." It at once became apparent, however, to experienced Physicians conversant with the proteiform manifestations of that excitable, nervous temperament, of which I have already had to

speak, that all these sensations were of the kind which the Physiologist terms 'subjective;' the state of the Sensorium on which they immediately depend, being the resultant, not of physical impressions made by external agencies upon the Organs of Sense, but of Cerebral changes connected with the ideas with which the minds of the 'sensitives' had come to be 'possessed.' The very fact that no manifestation of the supposed force could be obtained except through a conscious Human organism, should have been quite sufficient to suggest to any philosophic investigator that he had to do, not with a new Physical Force, but with a peculiar phase of Physiological action, by no means unfamiliar to those who had previously studied the influence of the Mind upon the Body. As Mr. Braid justly remarked, "It unfortunately happens "that the only test of this alleged new Force is the "Human Nerve; and not only so, but it is further ad- "mitted that its existence can only be demonstrated "by certain impressions imparted to, or experienced "by, *a comparatively small number of highly sensitive "and nervous subjects.* But it is an undoubted fact "that with many individuals, and especially of the "highly nervous, and imaginative, and abstractive "classes, a strong direction of inward consciousness to "any part of the body, especially if attended with the "expectation or belief of something being about to "happen, is quite sufficient to *change the physical action "of the part, and to produce such impressions from this "cause alone, as Baron Reichenbach attributes to his new "force.* Thus every variety of feeling may be excited

"from an *internal* or *mental* cause—such as heat or "cold, pricking, creeping, tingling, spasmodic twitching "of muscles, catalepsy, a feeling of attraction or repul- "sion, sights of every form or hue, odours, tastes, and "sounds, in endless variety, and so on, according as ac- "cident or intention may have suggested. Moreover, "the oftener such impressions have been excited, the "more readily may they be reproduced, under similar "circumstances, through the laws of association and "habit. Such being the fact, it must consequently be "obvious to every intelligent and unprejudiced person, "that no implicit reliance can be placed on the Human "Nerve, as a test of this new power in producing "effects from *external* impressions or influences; since "precisely the same phenomena may arise from an "*internal* or *mental* influence, when no external agency "whatever is in operation." [1]

The fact, which Von Reichenbach himself was honest enough to admit—that when a magnet was poised in a delicate balance, and the hand of a 'sensitive' was placed above or beneath it, the magnet was never drawn towards the hand — ought to have convinced him that the force which attracted the 'sensitive's' hand to the magnet has nothing in common with physical attractions, whose action is invariably *reciprocal;* but that it was the product of her own conviction that she *must* thus approximate it. So 'possessed' was he, however, by his pseudo-scientific conception, that the true significance of this fact entirely escaped him; and although he considered that he had taken adequate precautions to exclude

[1] A striking illustration of this principle will be found in Appendix H.

the conveyance of any suggestion of which his 'sensitives' should be conscious, he never tried the one test which would have been the *experimentum crucis* in regard to all the supposed influences of Magnets,—that of using *electro-magnets*, which could be 'made' and 'unmade' by completing or breaking the electric circuit, without any indication being given to the 'sensitive' of this change of its conditions. And the same remark applies to the more recent statement of Lord Lindsay, as to Mr. Home's recognition of the position of a permanent magnet in a totally darkened room; the value of this solitary fact, for which there are plenty of ways of accounting, never having been tested by the use of an Electro-magnet, whose active or passive condition should be entirely unknown, not only to Mr. Home, but to every person present.

That 'sensitives' like Von Reichenbach's, in so far as they are not intentional deceivers (which many hysterical subjects are constitutionally prone to be), can feel, see, or smell anything that they were led to believe that they *would* feel, see, or smell, was soon proved by the experimental enquiries of Mr. Braid, many of which I myself witnessed.[1] He found that not only in hysterical girls, but in many men and women "of a highly concentrative and imaginative "turn of mind," though otherwise in ordinary health, it was sufficient to fix the attention on any particular form of *expectancy*,—such as pricking, streaming, heat, cold, or other feelings, in any part of the body over

[1] *Appendix I.*

which a magnet was being drawn; luminous emanations from the poles of a magnet in the dark, in some cases even in full daylight; or the attraction of a magnet or crystal held within reach of the hand,—for that expectancy to be fully realised. And, conversely, the same sensations were equally produced when the subjects of them were led to *believe* that the same agency was being employed, although nothing whatever was really done; the same flames being seen when the magnet was concealed by shutting it in a box, or even when it was carried out of the room, without the knowledge of the subject; and the attraction of the magnet for the hand being entirely governed by the idea previously suggested, positive or negative results being thus obtained with either pole, as Mr. Braid might direct.

I had myself the opportunity of witnessing these 'vigilant phenomena' (as Mr. Braid termed them, from their being presented by individuals not asleep, though in a state of abstraction) upon one of Mr. Braid's best 'subjects,' a gentleman residing in Manchester, well known for his high intellectual culture, great general ability, and strict probity. He had such a remarkable power of voluntary abstraction, as to be able at any time to induce in himself a state akin to profound Reverie (corresponding to what has been since most inappropriately called the 'biological'), in which he became so completely 'possessed' by any idea strongly enforced upon him, that his whole state of feeling and action was dominated by it. Thus it was sufficient for him to place his hand upon the table, and fix his attention

upon it for half a minute, to be entirely unable to withdraw it, if assured in a determined tone that he *could not* do so. When his gaze had been steadily directed for a short time to the poles of a magnet, he could be brought to see flames issuing from them, of any form or colour that Mr. Braid chose to name. And when desired to place his hand upon one of the poles, and to fix his attention for a brief period upon it, the peremptory assurance that he *could not* detach it was sufficient to hold it there with such tenacity, that I saw Mr. Braid drag him round the room by the traction of the magnet which he held, in a way that reminded me of George Cruikshank's amusing illustration of the German fairy story of the Golden Goose. The attraction was dissolved by Mr. Braid's loud cheery 'All right, man,' which brought the subject back to his normal condition, as suddenly as the attraction of a powerful Electro-magnet for a heavy mass of iron ceases when the circuit is broken.

ELECTRO-BIOLOGY.

Similar experiments to the foregoing (which I first witnessed about thirty years ago) have been since repeated, over and over again, upon great numbers of persons, in whom a corresponding state can be induced by prolonged fixation of the vision on a small object held in the hand. It was in the year 1850 that a new manifestation of the supposed 'occult' power first attracted public attention, through the exhibition of it by a couple of itinerant Americans, who styled

themselves 'professors' of a new art which they termed *Electro-Biology*; asserting that by an influence of which the secret was only known to themselves, but which was partially derived from a little disk of zinc or copper held in the hand of the 'subject' and steadily gazed on by him, they could subjugate the most determined will, paralyse the strongest muscles, pervert the evidence of the senses, destroy the memory of even the most familiar things or of the most recent occurrences, induce obedience to any command, or make the individual believe himself transformed into anyone else;—all this, and much more, being done while he was still wide awake. They soon attracted large assemblages to witness their performances; and seldom failed to elicit some of the most remarkable phenomena from entire strangers to them, whose honesty could not be reasonably called in question. In place of a few peculiarly susceptible 'subjects' not always to be met with, and open to suspicion on various grounds, those who took up this practice found in almost every circle some individuals in whom the 'biological' state could be self-induced by the steady direction of their eyes to one point, at the ordinary reading distance, for a period usually varying from about five to twenty minutes; a much shorter time generally sufficing in cases in which the practice has been frequently repeated. In this condition, the whole course of thought is directed by external suggestions, the subject's own control over it being altogether suspended. Yet he differs from the somnambulist in being awake; that is, he has generally the

use of all his senses, and usually, though not always, preserves a distinct recollection of all that has taken place. There is, in fact, a gradational transition from the 'biological' to the 'mesmeric' state; just as there is a passage from the state of profound reverie or 'day-dreaming' to that of ordinary sleep. All its strange phenomena are referrible to one simple principle—the possession of the mind by a *dominant idea*, from which, however absurd it may be, the subject cannot free himself by bringing it to the test of actual experience, because the suspension of his self-directing power prevents him from correcting his ideational state by comparing it with external realities; this suspension being often as complete as it is in dreaming, so that, though the senses are awake, they cannot be turned to account. But it may exist in regard to one sense only, the impressions made on others being truly represented to the mind. Thus I have seen instances in which a 'biologised' subject could be made to believe himself to be *tasting* anything which the operator might assure him that he *would* taste—such as milk, coffee, wine, or porter—when drinking a glass of pure water, though he was instantly disabused by *looking* at the liquid; whilst another would *see* milk or coffee, wine or porter, as he was directed, but would instantly set himself right when he *tasted* the liquid. Nothing can be more instructive than to experiment upon a subject who has no misgivings of this kind, but whose perceptions are altogether under the direction of the ideas impressed upon him. He may be made to exhibit all the manifestations of

delight which would be called forth by the viands or liquors of which he may be most fond; and these may be turned in a moment into expressions of the strongest disgust, by simply giving the word which shall (ideally) change it into something he detests. Or if, when he believes himself to be drinking a cup of tea or coffee, he be made to believe that it is very hot, nothing will induce him to take more than a sip at a time; yet a moment afterwards he will be ready to swallow the whole in gulps, if assured that the liquid is quite cool. Tell him, again, that his seat is growing hot under him, and that he will not be able to remain long upon it, and he will fidget uneasily for some time, and at last start up with all the indications of having found the heat no longer bearable. Whilst he is firmly grasping a stick in his hand, let him be assured that it will burn him if he continue to hold it, or that it is becoming so heavy that he can no longer sustain it; and he will presently drop it with gestures conformable in each case to the idea.

It may, of course, be said that what I have presented to you as real phenomena are only simulated; and as there would be nothing difficult in such simulation, the supposition is clearly admissible. But they are so perfectly conformable to the known principles of Mental action, that there is no justification for the suspicion of deceit, when they are presented by persons in whose good faith we have reasonable grounds of confidence. For everyone must be conscious of occasional mistakes as to what he supposes himself to have seen or heard, which he can trace to

a previous 'expectancy.' Of this I can give you a very striking illustration in a case narrated by Dr. Tuke. A lady, whose mind had been a good deal occupied on the subject of drinking-fountains, was walking from Penryn to Falmouth, and thought she saw in the road a newly-erected fountain, with the inscription, 'If any man thirst, let him come hither and drink.' Some time afterwards, on mentioning the fact with pleasure to the daughters of a gentleman whom she supposed to have erected it, she was greatly surprised to learn from them that no such drinking-fountain existed; and on subsequently repairing to the spot, she found nothing but a few stones, which constituted the foundation on which her expectant imagination had built an ideal superstructure.

The same may be said with regard to the control exercised over the muscular movements of the Biologised 'subject,' by the persuasion that he *must* or that he *cannot* perform a particular action. His hands being placed in contact with one another, he is assured that he cannot separate them; and they remain as if firmly glued together, in spite of all his apparent efforts to draw them apart. Or, a hand being held up before him, he is assured that he cannot succeed in striking it; and not only does all his power seem inadequate to the performance of this simple action, but it actually is so, as long as he remains convinced of its entire impossibility. So I have seen a strong man chained down to his chair, prevented from stepping over a stick on the floor, or obliged to remain almost doubled upon himself in a

stooping position, by the assurance that he *could* not move. On the other hand, an extraordinary power may be called forth in any set of muscles—as in Hypnotised subjects—by the assurance that the action to be performed by them may be executed with the greatest facility. This, again, is quite conformable to ordinary experience; the assurance that we *can* perform some feat of strength or dexterity, nerving us to the effort; whilst our power is weakened by our own doubts of success, still more by the unfavourable impression produced by a confident prediction of failure. It is only needed for the mind to become completely 'possessed' by the one or the other conviction, for it to produce the bodily results of this kind which I have over and over again witnessed.

Now the phenomena of the 'Biological' condition seem to me of peculiar significance, in relation to a large class of those which are claimed as manifestations of a supposed 'Spiritual' agency. When a number of persons of that "concentrative and imaginative turn of mind" which predisposes them to this condition, sit for a couple of hours (especially if in the dark) with the expectation of some extraordinary occurrence,—such as the rising and floating in the air, either of the human body, or of chairs or tables, without any physical agency; the crawling of live lobsters over their persons; the contact of the hands, the sound of the voices, or the visible luminous shapes,[1] of their

[1] I put aside the question of fraud, to which recourse has doubtless often been had for the production of these phenomena; being satisfied that they are often genuinely 'subjective.'

departed friends,—it is perfectly conformable to scientific probability that they should pass more or less completely (like Reichenbach's 'sensitives') into a state which is neither waking nor sleeping, but between the two, in which they see, hear, or feel by touch, anything they have been led to expect will present itself. And the accordance of their testimony, in regard to such occurrences, is only such as is produced by the community of the 'dominant idea' with which they are all 'possessed,' a community of which history furnishes any amount of strangely-varied examples. And thus it becomes obvious that the testimony of a single cool-headed sceptic, who asserts that nothing extraordinary has really occurred, should be accepted as more trustworthy than that of any number of believers, who have, as it were, *created* the sensorial result by their anticipation of it.

PENDULE EXPLORATEUR.

I have now to show you that the like 'expectancy' can also produce *movements* of various kinds through the instrumentality of the nervo-muscular apparatus, without the least consciousness on the part of its subject of his being himself the instrument of their performance; a physiological fact which is the key to the whole mystery of Table-turning and Table-talking. I very well remember the prevalence, in my schoolboy days, of a belief that when a ring, a button, or any other small body, suspended by a string over the end of the finger, was brought near the outside or

inside of a glass tumbler, it would strike the hour of the day against its surface; and the experiment certainly succeeded in the hands of several of my schoolfellows, who tried it in all good faith, getting up in the middle of the night to test it, in entire ignorance—as they declared—of the real time. But, as was pointed out by M. Chevreul, who investigated this subject in a truly scientific spirit more than forty years ago,[1] it is impossible by any voluntary effort to keep the hand absolutely still for a length of time in the position required; an involuntary tremulousness is always observable in the suspended body; and if the attention be fixed on it with the expectation that its vibrations will take a definite direction, they are very likely to do so. But their persistence in that direction is found to last only so long as they are guided by the sight of the operator; the oscillations at once and entirely losing their constancy, if he closes or turns away his eyes. Thus it became obvious that, in the striking of the hour, the influence which determines the number of strokes is really the knowledge or suspicion present to the *mind* of the operator, which involuntarily and unconsciously directs the action of his muscles; and the same *rationale* was applied by M. Chevreul to other cases in which this *pendule explorateur* (the use of which can be traced back to a very remote date) has been appealed to for answers to questions of very diverse character.[2]

[1] See his letter to M Ampère in the *Revue des Deux Mondes*, Mai, 1833.

[2] *Appendix K.*

When, however, 'Odyle' came to the front, and the world of curious but unscientific enquirers was again 'possessed' by the idea of an unknown and mysterious agency, capable of manifesting itself in an unlimited variety of ways, the *pendule explorateur* was brought into vogue, under the name of *Odometer*, by Dr. Herbert Mayo,[1] who investigated its action with a great show of scientific precision; starting, however, with the foregone conclusion that its oscillations were directed by the hypothetical 'odyle,' and altogether ignoring the mental participation of the operator, whom he supposed to be as passive as a thermometer or a balance. By a series of elaborate experiments, he convinced himself that the direction and extent of the oscillations could be altered, either by a change in the nature of the substances placed beneath the 'odometer,' or by the contact of the hand of a person of the opposite sex, or even of the other hand of the experimenter himself, with that from which it was suspended. And he gradually reduced his result to a series of definite laws, which he regarded as having the same constancy as those of Physics or Chemistry. Unfortunately, however, other experimenters, who worked out the enquiry with similar perseverance and good faith, arrived at such different results, that it soon came to be obvious that what Astronomical observers call the 'personal equation' of the individual has a very large share in determining them. A very intelligent medical friend of my own, then residing abroad, wrote me long letters full of the detailed

[1] *On the Truths contained in Popular Superstitions*, 1851.

results of his own enquiries, on which he was anxious for my opinion. My reply was simply, "Shut your "eyes, or turn them away; let some one else watch the "oscillations under the conditions you have specified, "and record their results; and you will find, if I do not "mistake, that they will then show an entire *want* of "the constancy you have hitherto observed." His next letter informed me that such proved to be the case; so that he came entirely to agree with me as to the dependence of the previous uniformity of his results on his own 'expectancy.'

A curious variation of the 'Odometer' was introduced by Mr. Rutter, then manager of the gas-works at Brighton, under the name of 'Magnetometer;' which was simply a gallows-shaped frame, mounted on a solid base, and having a metallic ball suspended from its free extremity. When the finger was kept for a short time in contact with this frame, the ball began to oscillate, usually in some definite direction; changing that direction with any change of circumstances, after the manner of Dr. Mayo's 'odometer.' To many persons, as to Mr. Rutter himself, it appeared impossible that these oscillations could have their origin in any movement of the operator; but everyone who knew how difficult it is to prevent vibrations in the supporting frame-work of a Microscope or a Telescope, and who recognised in the construction of the 'Magnetometer' exactly such an arrangement as enabled the smallest amount of imparted motion to produce the greatest sensible effect, was prepared to anticipate that the oscillations of the suspended ball would be

as much maintained and guided by the 'expectancy' of the operator, as they are when it is hung directly from his own finger. Experiment soon proved this to be the case; for it was found that the constancy of the vibrations entirely depended upon the operator's watching their direction, either by his own eyes or by those of some one else; and further, that when such a change was made *without his knowledge* in the conditions of the experiment, as *ought*, theoretically, to alter the direction of the oscillations, no such alteration took place.

A very amusing *exposé* of the mystery of the 'Magnetometer' resulted from its application by Dr. Madden, a Homœopathic physician at Brighton, to test the virtues of his 'globules,' as to which he had, of course, some pre-formed conclusions of his own. The results of his first experiments entirely corresponded with his ideas of what they ought to be; for when a globule of one medicine was taken into his disengaged hand, the suspended ball oscillated longitudinally; and when this globule was changed for another of (supposed) opposite virtues, the direction of the oscillations became transverse. Another Homœopathic physician, however, was going through a similar course of experiments; and his results, while conformable to his own notions of the virtues of the globules, were by no means accordant with those of Dr. Madden. The latter was thus led to re-investigate the matter with a precaution he had omitted in the first instance; —namely, that the globules should be placed in his hand by another person, without any hint being given

him of their nature. From the moment he began to work upon this plan, the whole aspect of the subject was changed; globules that produced longitudinal oscillations at one time, gave transverse at another; whilst globules of the most opposite remedial virtues gave no sign of difference. And thus he was soon led to the conviction, which he avowed with a candour very creditable to him, that the system he had built up had no better foundation than his own 'expectancy' of what the results of each experiment should be; that anticipation expressing itself unconsciously in involuntary and imperceptible movements of his finger, which communicated a rhythmical vibration to the framework when the oscillations of the ball suspended from it were watched.

Thus, by the investigations of scientific experts who were alive to the sources of fallacy which the introduction of the *human* element always brings into play, the hypothesis of Odylic force was proved to be completely baseless; the phenomena which were supposed to indicate its existence being traceable to the Physiological conditions of the Human organisms through whose instrumentality they were manifested. The principle that the state of 'expectant attention' is capable of giving rise either to *sensations* or to involuntary *movements*, according to the nature of the expectancy, had been previously recognised in Physiological science, and was not invented for the occasion; but the phenomena I have been describing to you are among its most 'pregnant instances.'

DIVINING ROD.

The same principle furnishes what I believe to be the true scientific explanation of the supposed mystery of the Divining Rod, often used where water is scarce for the discovery of springs, and in mining districts for the detection of metallic veins. This rod is a forked twig, shaped like the letter Y, hazel being usually preferred; and the diviner walks over the ground to be explored, firmly grasping its two prongs with his hands, in such a position that its stem points forwards. After a time the end of the stem points downwards, often, it is said, with a sort of writhing or struggling motion, especially when the fork is tightly grasped; and sometimes it even turns backwards, so as to point towards, instead of away from, the body of the diviner. Now there is a very large body of apparently reliable testimony, that when the ground has been opened in situations thus indicated, either water-springs or metallic veins have been found beneath; and it is quite certain that the existence of such a power is a matter of unquestioning faith on the part of large numbers of intelligent persons, who have witnessed what they believed to be its genuine manifestations.[1] This subject, however, was carefully enquired into more than forty years ago by MM. Chevreul and Biot; and their experimental conclusions anticipated

[1] I have lately received a pamphlet from an Engineer in the United States, giving most circumstantial details of successes thus obtained within his own experience.

those to which I was myself led, in ignorance of them, by Physiological reasoning. They found that the forked twig cannot be firmly grasped for a quarter of an hour or more in the regular position, without the induction of a state of muscular tension which at last discharges itself in movement; and this acts on the prongs of the fork in such a manner, as to cause its stem to point either upwards or downwards or to one side. The occasion of this discharge, and the direction of the movement, are greatly influenced—like the oscillations of bodies suspended from the finger—by the expectancy of the operator; so that if he has any suspicion or surmise as to the 'whereabouts' of the object of his search, an involuntary and unconscious action of his muscles causes the point of the rod to dip over it. This was admitted even by Dr. H. Mayo, a believer in the existence of an 'Od-force' governing the movements of the rod; for he found that when his 'diviner' knew which way the fork was expected to move, it invariably answered his expectations; whilst, when he had the man blindfolded, the results were uncertain and contradictory. Hence he came to the conclusion that several of those in whose hands the Divining Rod moves, set it in motion, and direct its motion (however unintentionally and unconsciously) by the pressure of their fingers, and by carrying their hands near-to or apart-from one another.[1]

Again, since not one individual in forty, in the localities in which the virtues of the Divining Rod are still held as an article of faith, is found to obtain any

[1] *On the Truths contained in Popular Superstitions*, Letter I., p. 19.

results from its use, it becomes obvious that its movements must be due, not to any Physical agency directly affecting the rod, but to some influence exerted through its holder. And that this influence is his expectation of the result, may, I think, be pretty confidently affirmed. For it has been clearly shown, by careful and repeated experiments, that, while the rod dips when the 'diviner' knows or believes he is over a water-spring or a metallic vein, the results are uncertain, contradictory, or simply negative, when he is blindfolded, so as not to be aware precisely where he is. The following is a striking case of this kind, that has been lately brought to my knowledge :—

"A friend of mine (says Dr. Beard),[1] an aged clergyman, of thorough integrity and fairness, has for many years—the larger part of his natural life, I believe—enjoyed the reputation of being especially skilled in the finding of places to dig wells, by means of a divining rod of witch hazel, or the fresh branches of apple or other trees. His fame has spread far ; and the accounts that are given by him and of him, are, to those who think human testimony worth anything, overwhelmingly convincing. He consented to allow me to experiment with him. I found that only a few moments were required to prove that his fancied gift was a delusion, and could be explained wholly by unconscious muscular motion, the result of expectancy and coincidence. In his own yard there was known to be a stream of water running through a small pipe a few feet below the surface. Marching over and near

[1] *Review of Medicine and Pharmacy* (New York), Sept. 1875.

this, the rod continually pointed strongly downwards, and several times turned clear over. These places I marked, blindfolded him, marched him about until he knew not where he was, and took him over the same ground over and over again; and although the rod went down a number of times, it did not once point to or near the places previously indicated."

I very well remember having heard, some 35 years ago, from Mr. Dilke (the grandfather of the present Sir Charles) of an experiment of this kind which he had himself made upon a young Portuguese, who had come to him with a letter of introduction, describing the bearer of it as possessing a most remarkable power of finding, by means of the Divining Rod, metals concealed from view. Mr. Dilke's family being at a summer residence in the country, his plate had all been sent to his chambers in the Adelphi, where he was visited by the Portuguese youth; to whom he said "Go about the room with your rod, and try if you can find any mass of metal." The youth did so; and his rod dipped over a large standing desk, in which Mr. D.'s plate had been temporarily lodged. Seeing, however, that there were circumstances which might reasonably suggest this guess, Mr. Dilke asked the youth if he was willing to allow his divining power to be tested under conditions which should exclude all such suggestion; and having received a ready assent, he took his measures accordingly. Taking his plate-box down to his country residence, he secretly buried it just beneath the soil in a newly ploughed field; selecting a spot which he could identify by cross-

bearings of conspicuous trees, and getting a plough drawn again over its surface, so that the ridges and furrows should correspond precisely with those of the rest of the field. The young diviner was then summoned from London, and challenged to find beneath the soil of this field the very same plate which he had previously detected in Mr. Dilke's desk at the Adelphi; but having nothing whatever to guide him even to a guess, he was completely at fault. Mr. Dilke's impression was that he was not an impostor, but a sincere believer in his own power, as the 'dowsers' of mining districts seem unquestionably to be.—The test of blindfolding the diviner, and then leading him about in different directions so as to put him completely at fault in regard to his locality, is one that can be very readily applied when the diviner is acting in good faith; but, as I shall show you in the next lecture, it requires very special precautions to blindfold a person who is determined to see; and in some of the cases which seem to have stood this test, it seems not improbable that vision was not altogether precluded.

An additional reason for attributing the action of the Divining Rod to the muscular movements called forth by a state of 'expectancy' (perhaps not always consciously entertained) on the part of the performer, seems to me to be furnished by the diversity of the powers that have been attributed to it; such as that of identifying murderers and indicating the direction of their flight, discovering the lost boundaries of lands, detecting the birth-place and parentage of foundlings, &c. The older writers do not in the least call in

question the reality of the powers of the hazel fork; but learnedly discuss whether they are due to natural or to diabolic agency. When, in the last century, the phenomena of Electricity and Magnetism became objects of scientific study, but had not yet been comprehended under the grasp of law, it was natural that those of the Divining Rod should be referred to agencies so convenient, which seemed ready to account for anything otherwise unaccountable. But since Physicists and Physiologists have come to agree that the moving power is furnished by nothing else than the muscles of the diviner, the only question that remains is—what calls forth its exercise? And the conclusive evidence I have given you, as to the dependence of the definite oscillations of suspended bodies on involuntary movements unconsciously determined by states of *expectancy*, clearly points to the conclusion that we have in the supposed mystery of the Divining Rod only another case of the same kind. It is well known that persons who are conversant with the Geological structure of a district, are often able to indicate with considerable certainty in what spot, and at what depth, Water will be found; and men of less scientific knowledge, but of considerable practical experience, frequently arrive at a true conclusion on this point, without being able to assign reasons for their opinions. Exactly the same may be said in regard to the mineral structure of a mining district; the course of a Metallic vein being often correctly indicated by the shrewd guess of an observant workman, where the scientific reasoning of the mining engineer

altogether fails. It is an experience we are continually encountering in other walks of life, that particular persons are guided,—some apparently by an original, and others by an acquired intuition,—to conclusions for which they can give no adequate reasons, but which subsequent events prove to have been correct; and I look upon the Divining Rod in its various applications as only a peculiar method of giving expression to results worked out by an Automatic process of this kind, even before they rise to distinct mental Consciousness. Various other methods of Divination that seem to be practised in perfectly good faith—such, for example, as the Bible and key test, used for the discovery of stolen property—are probably to be attributed to the same agency; the Cerebral traces of past occurrences often supplying materials for the automatic evolution of a result (as they unquestionably do in dreams), when the occurrences themselves have been forgotten.

THOUGHT-READING.

Many of the cases of so-called 'Thought-reading' are clearly of the same kind; the communication being made by unconscious muscular action on the part of one person, and automatically interpreted by the other,—as in the following instance. Several persons being assembled, one of them leaves the room, and during his [1] absence some object is hidden. On

[1] The experiment succeeds equally well, or perhaps better, with ladies.

the absentee's re-entrance, two persons who know the hiding-place stand one on either side of him, and establish some personal contact with him; one method being for each to place a finger on the shoulder next him, while another is for each to place a hand on his body, one on the front and the other on the back. He walks about the room between the two, and generally succeeds before long in finding the hidden object; being led towards it (as careful observation and experiment have fully proved) by the involuntary muscular action of his unconscious guides, one or the other of them pressing more heavily when the object is on his side, and the finder as involuntarily turning towards that side.

These and other curious results of recent enquiry, while strictly conformable to Physiological principles, greatly extend our knowledge of the modes in which states of Brain express themselves unconsciously and involuntarily in Muscular action; and I dwell on them the more, because they seem to me to afford the key (as I shall explain in my second lecture) to some of these phenomena of Spiritualistic divination, which have been most perplexing to many who have come in contact with them, without being disposed to accept the spiritualistic interpretation of them.

There seems no inherent improbability in the supposition, that the power of *intuitively* interpreting the indications involuntarily furnished by expression of countenance, gesture, manner, &c., so as to divine what is passing in the mind of another person, may be greatly intensified in that state of concentration

which has been already shown (p. 19), to produce a temporary exaltation of other faculties. There can be no question that this divining power is naturally possessed in a very remarkable degree by certain individuals; and that it may be greatly improved by cultivation,—going in many instances far beyond what can have been learned by experience as to the *meaning* of the indications on which it rests. But I have not met with any cases, either in my own experience, or in the recorded experiments of such as have proved their competence to conduct them, of the exercise of this power without the intermediation of those expressional signs, which, as in the case I have just cited, are *made* and *interpreted* alike unconsciously.

LECTURE II.

SEVERAL years ago, an eminent Colonial Judge with whom I was discussing the subject on which I am now to address you, said to me, "According to the ordinary "rules of evidence, by which I am accustomed to be "guided in the administration of justice, I cannot refuse "credit to persons whose honesty and competence "seem beyond doubt, in regard to facts which they de- "clare themselves to have witnessed; and such is the "character of a great body of testimony I have received "in regard to the phenomena of Spiritualism." In arguing this matter with my friend at the time, I took my stand upon the fact, well known not only to lawyers but to all men of large experience in affairs, that thoroughly honest and competent witnesses continually differ extremely in their accounts of the very same transaction, according to their mental prepossessions in regard to it; and I gave him instances that had occurred within my own experience, in which a prepossession in favour of 'occult' agencies had given origin and currency to statements reported by witnesses whose good faith could not be called in question, which careful enquiry afterwards proved to have no real foundation in fact.

Subsequent study, however, of the whole subject

of the validity of Testimony, has led me not only to attach yet greater importance to what Metaphysicians call its 'subjective' element—that is, the state of mind of the witness who gives it; but, further, to see that we must utterly fail to appreciate the true value of evidence, if we do not take the general experience of intelligent men, embodied in what we term 'educated common sense,' as the basis of our estimate. In all ordinary legal procedures, the witnesses on each side depose to things which *might have* happened; and in case of a 'conflict of testimony,' the penetration of the presiding judge, and the good sense of the jury, are exerted in trying to find out what really did happen; their search being guided partly by the relative confidence they place in the several witnesses, but partly by the general probabilities of the case.

Now, it would be at once accepted as a guiding principle by any administrator of justice, that the more extraordinary any assertion—that is, the more widely it departs from ordinary experience—the stronger is the testimony needed to give it a claim on our acceptance as truth; so that while *ordinary* evidence may very properly be admitted as adequate proof of any ordinary occurrence, an *extraordinary* weight of evidence would be rightly required to establish the credibility of any statement that is in itself inherently improbable, the strength of the proof required being proportional to the improbability. And if a statement made by any witness in a Court of Justice should be *completely in opposition to the universal experience of Mankind, as embodied in those Laws of Nature which*

are accepted by all men of ordinary intelligence, the judge and jury would most assuredly put that particular statement 'out of court' as a thing that could not have happened; whatever might be the value they would assign to the testimony of the same witness as to ordinary matters. Thus if, in order to account for the signature of a will in London at a certain time, by a person who could be proved, beyond reasonable doubt, to have been in Edinburgh only an hour before, either a single witness, or any number of witnesses, were to affirm that the testator had been carried by 'the spirits' through the air all the way from Edinburgh to London in that hour, I ask whether the 'common sense' of the whole Court would not revolt at such an assertion, as a thing not *in rerum naturâ*. And yet there are at the present time numbers of educated men and women, who have so completely surrendered their 'common sense' to a dominant prepossession, as to maintain that any such monstrous fiction ought to be believed, even upon the evidence of a single witness, if that witness be one upon whose testimony we should rely in the ordinary affairs of life!

There is, indeed, no other test than that of 'common sense,' for distinguishing between the delusions of a Monomaniac, and the conclusions drawn by sane minds from the same data. There are many persons who are perfectly rational upon every subject but one; and who, if put on their trial, will stand a searching cross-examination without betraying themselves, especially if they know from previous experience what

it is that they should endeavour to conceal. But a questioner who has received the right cue, and skilfully follows it up, will generally succeed at last in extracting an answer which enables him to turn to the jury and say—"You see that whilst sane enough "in other matters, the patient upon this point is clearly "mad." Yet the proof of such madness consists in nothing else than the absurd discordance between the fixed conviction entertained by the individual, and what is accepted by the world at large as indubitably true; as, for example, when he declares himself to be one of the persons of the Trinity, or affirms (as in a case now before me) that he is a victim to the machinations of infernal powers, whom he overhears to be conspiring against him. We have no other basis than the dictates of 'common sense' for regarding such persons as the subjects of pitiable delusions, and have no other justification for treating them accordingly. Their convictions are perfectly true *to themselves*; they maintain in all sincerity that it is only *they* who are sane, and that the rest of mankind must be mad not to see the matter in the same light; and all this arises from their having allowed their minds to fall under subjection to some 'dominant idea,' which at last takes full possession of them. Thus, for example, a man suffering under incipient *melancholia* begins by taking gloomy views of everything that concerns him; his affairs are all going to ruin; his family and friends are alienated from him; the world in general is 'going to the bad.' Under the influence of this morbid colouring, he takes more and more distorted views of

the occurrences of his present life, and looks back with exaggerated reprobation at the errors of his past; and in time, not only *ideal misrepresentations* of real occurrences, but *ideal constructions* having scarcely any or perhaps no basis in actual fact, take full possession of his mind, which credits only his own imaginings, and refuses to accept the corrections given by the assurances of those who surround him. So I have seen a woman who has had the misfortune to fix her affections upon a man who did not return them, first misinterpret ordinary civilities as expressions of devoted attachment, and then, by constantly dwelling upon her own feelings, mentally construct ideal representations of occurrences which she comes to believe in as real; not allowing herself to be undeceived, even when the object of her attachment declares that the sayings and doings attributed to him are altogether imaginary.

It is in this way that I account for what appear to me to be the strange delusions, which have laid hold at the present time of a number of persons who are not only perfectly sane and rational upon all other subjects, but may be eminently distinguished by intellectual ability. They first surrender themselves, without due enquiry, to a disposition to believe in 'occult' agencies; and having so surrendered themselves, they interpret everything in accordance with that belief. The best protection against such surrender appears to me to be the *early culture* of those scientific habits of thought, which shape, when once established, the whole future intellectual course of the individual.

The case is not really altered by the participation of large numbers of persons in the same delusion ; in fact, the majority sometimes goes mad, the few who retain their 'common sense' being the exceptions. Of this we have a notable instance in the Witch-persecutions of the seventeenth century, mainly instigated by King James I. and his Theological allies; who, because 'witchcraft' and other 'curious arts' are condemned both by the Mosaic law and by Apostolic authority, 'stirred up the people' against those who were supposed to practise them, and branded every doubter as an atheist.

The Witch-persecution carried on by James in Scotland, before his accession to the English throne, is believed to have caused the sacrifice of several thousand lives ; but in England, under the too celebrated Witch Act, which was passed by Parliament under his influence, in the first year of his reign, it was far more terribly destructive. No fewer than seventy thousand persons are believed to have been executed for witchcraft between the years 1603 and 1680 ; a number far larger than that of the sufferers in all the religious persecutions of the later Tudors.

The 'History of Human Error' seems to me, in fact, to have no pages more full of instruction to such as can read them aright, than those which chronicle the trials for this offence, which were presided over by judges—like Sir Matthew Hale—of the highest repute for learning, uprightness, and humanity. Not only were the most trivial and ridiculous circumstances admitted as proofs of the charge, but the most

monstrous assertions were accepted without the slightest question. Thus in 1663 a woman was hanged at Taunton, on the evidence of a hunter that a hare which had taken refuge from his pursuit in a bush, was found on the opposite side in the likeness of a witch, who, having assumed the form of the animal, took advantage of her hiding-place to resume her proper shape. And the proof of these marvels did not rest on the testimony of single witnesses. In 1658 a woman was hung at Chard Assizes for having bewitched a boy of twelve years old, who was seen to rise in the air, and pass some thirty yards over a garden wall; while at another time he was found in a room with his hands flat against a beam at the top, and his body two or three feet above the floor—*nine people at a time seeing him in this position.*

In 1677, however, an able work was published under the title of *The Displaying of Supposed Witchcraft,* in which the author, Webster, who had seen a great deal of witch-trials, maintained the opinion that the whole system of witchcraft was founded on natural phenomena, credulity, torture, imposture, or delusion; and a reaction seems then to have begun in favour of 'common sense,' which was fostered by the Revolution of 1688. Though accusations continued to be made, the judicious conduct of Lord Chief Justice Holt, who presided over trials for this offence in various parts of the kingdom, generally caused the acquittal of the prisoners; and when they were found guilty and condemned, the capital sentence was seldom carried out. The last witch-execution in

Scotland, where the Theological prepossession longest maintained its hold over the public, was in 1722; and the Witch Act was repealed in 1736. The belief in witchcraft still survived, however, not only among the ignorant vulgar, but in the minds of some of the most enlightened men of the last century. We find Addison, in the earlier part of it, speaking of witchcraft as a thing that could not reasonably be called in question; while, towards its close, Dr. Johnson maintained that as the non-existence of witches could not be proved, there was no sufficient ground for denying their diabolical powers. This is one of the cases, however, in which an enlightened 'common sense'—the intelligent embodiment of the general experience of mankind—is a much safer guide than logic. The belief in Witchcraft was not killed by discussion, but perished by neglect. The 'childish things' believed in by our ancestors have been 'put away' by the full-grown sense of the present generation; the testimony in their favour, once unquestionably accepted as convincing, is no longer deemed worthy of being even considered; and it is only among those of our hereditarily uneducated population, whose general intelligence is about upon a par with that of a Hottentot or an Esquimaux, that 'cunning women' are able to turn this lingering superstition to the purposes of gain.

Of the rapid spread of the Witchcraft delusion in a population whose theological 'prepossession' favoured its development, and of its equally rapid decline when 'common sense' resumed its due ascen-

dancy, no case was more remarkable than the Epidemic that spread through Puritan New England, just two hundred years ago. This was initiated by the trial and execution of a poor Irishman, who, being obnoxious as a papist, was accused of having bewitched two children who suffered from convulsive attacks. Dr. Cotton Mather, Fellow of Harvard College, received one of these children into his house; and asserted the girl's possession by evil spirits as an indubitable fact, on the following grounds:— She would suddenly, in the presence of a number of spectators, fall into a trance, rise up, place herself in a riding attitude as if setting out for the Sabbath, and hold conversation with invisible beings. When under the influence of 'hellish charms' she took pleasure in reading or hearing 'bad' books, which she was permitted to do with perfect freedom. These books included the Prayer Book of the English Episcopal Church, the writings of Quakers, and Popish productions. On the other hand, whenever the Bible was taken up, the devil threw her into the most fearful convulsions. It was upon such testimony that the unfortunate Irishman was convicted and executed!

The judicial persecution, once begun, soon raged with such severity that its victims were hung by half a dozen or more at a time; one of them being a minister, who had provoked his judges by calling in question the very existence of witchcraft. The accusations became more and more numerous, and at last implicated people of the highest consideration, among them the wife of a minister who had been one of the

most active promoters of these proceedings; so that the authorities felt it necessary for their own safety at once to check the further progress of the infection. Judges and juries then found out that they had been 'sadly deluded and mistaken,' only Dr. Cotton Mather's father (who was President of Harvard) and other Theologians still holding their ground; and the release, by the Governor, of a hundred and fifty witches who were under arrest, and the stoppage of proceedings against two hundred more who were about to be arrested, came to be accepted in a short time with general approval, though vehemently protested against by Cotton Mather in these remarkable terms:—"*Fleshy* people may burlesque these things; "but when hundreds of the most solemn people, in a "country where they have as much mother-wit, cer- "tainly, as the rest of mankind, *know them to be true*, "nothing but the froward spirit of Sadduceeism can "question them. I have not yet mentioned so much as "one thing that will not be justified, if it be required, "by the oaths of more considerate persons than any "that can ridicule these odd phenomena."

Now this is precisely the position taken by the modern Spiritualists; who revive under new forms the doctrines which were supposed to have faded away under the light of Modern Science. The 'hundreds of the most solemn people,' who are ready to justify their conviction of such wonders as Mr. Home's and Mrs. Guppy-Volckman's aerial flights, the elongation of the body of the former, or the bringing in of ice, flowers, and fruits by the minister-

ing spirits of the latter, are equally bound to accept the testimony, given on oath and in solemn form of law, which satisfied able judges and honest juries two centuries ago, that tens of thousands of innocent people had entered into the guilty league with Satan, whose punishment was death here and everlasting damnation hereafter. The unbelieving Sadducees of the present time, on the other hand, can appeal to the same sad history, in justification of their refusal to admit the testimony of the votaries of a system which is to their minds quite as absurd and irrational as that of Witchcraft; and of their disbelief in the reality of alleged occurrences which they deem it an insult to their common sense to be asked to credit. For the faithful few, who two centuries ago rallied round the standard of Rationalism, in antagonism not only to the dead weight of ignorant prejudice, but to the active force of learning and authority, had no other defence of their position than the *inherent incredibility* of the opposing testimony; notwithstanding that this was clearly given (in many cases if not in all) in perfect good faith, and often admitted as true even by the unfortunate victims it incriminated, who seem to have themselves participated in what every person of ordinary intelligence now admits to have been a pitiable delusion.

But, it may be objected, the acceptance of this test would equally justify a disbelief in any of those marvels which are rightly esteemed the glories of Modern Science. Tell a man, for instance, to whom the fact is new, that the hand may be held without

injury in the stream of liquid iron issuing from the smelting furnace, or dipped and moved about in a bucket of the molten metal; and he will probably reject your assertion as altogether incredible. Yet this statement, while apparently antagonistic to universal experience, can be shown to be really conformable to it. For the protection of the hand from being burned by the hot metal, when the intervention of a film of vapour has been secured by moistening its surface, is just what you may see every day in the rolling off of drops of fluid from a heated iron, in the application of the familiar test by which the laundress judges of the suitability of its temperature.

Take, again, the case of the Electric Telegraph, and especially that of the Atlantic cable. If submarine telegraphy had not been led up to by progressive steps, the mass of mankind would have undoubtedly scoffed at the idea of "putting a girdle round the earth in twenty minutes"; and even after the first Atlantic cable had actually conveyed messages of great importance, to the full satisfaction of those who sent them, there were obstinate sceptics who maintained that its asserted success *must* be a falsehood, as being opposed to 'common sense.' But every person sufficiently educated to understand the scientific principles of its construction, was perfectly prepared to accept it as a real success; the speedy failure of the first cable, so far from justifying the original scepticism, only serving to show what the conditions were, by due observance of which permanent success might be assured.

Compare this with another curious demand upon public credence—the 'panasilinic telegraph'—which was made by an ingenious hoaxer about the time that the success of land electric telegraphy first set the world to dream of uniting the New World with the Old by the like means. It was gravely announced that a French *savant* had discovered that if two snails were brought for a time into mutual relation, such a sympathy would be established between them, that, however widely they might be separated, the movements of each would correspond with those of the other; so that if a couple of friends, one in New York and the other in Paris, wished to converse, they had only to provide themselves with an alphabet and figure dial, get a pair of sympathetic snails, and appoint a time for their conversation. The one who led off was to make his snail walk over the dial, and to stop him at the letter or figure he wished to indicate; his friend's snail would do exactly the same, and thus the message would be gradually spelled out.—Now I perfectly well remember that this ridiculous absurdity found many believers. My old friend Dr. Robert Chambers, ever on the watch for scientific novelties, gave currency to the statement in *Chambers's Journal*, without, however, committing himself to its truth. And I am sure that its very marvellousness had an attraction for those credulous subjects, who are ready to surrender their common sense to any pretender to occult powers,—the more readily, it often seems, in proportion to the extravagance of his claims.

I might cite the Spectroscope and the Radiometer

as additional cases, not merely of the readiness, but of the eagerness of Scientific men, to extend their knowledge of the agencies of Nature in entirely new directions; and to accept with implicit confidence, *upon adequate evidence*, revelations in regard to matters lying so completely beyond the domain covered by previous experience, as entirely to transcend, if not directly to violate it. Now this, in the first case, is because the whole of that wonderful fabric of Spectrum-analysis, by which we are now enabled to study the chemical and physical constitution of every kind of Celestial object which the telescope can render visible to us, has been built up, course by course, on the basis of one of our most familiar scientific experiences —the dark lines that cross the solar spectrum. So, Mr. Crookes's invention of the Radiometer was the culmination of a long series of experimental enquiries, the results of which could be demonstrated at any time and to any number of persons; the fundamental fact of the vanes being driven round by radiant force being thus put beyond dispute. And while, as I stated to you in my previous lecture, what at first seemed the obvious interpretation of this fact—namely, that radiant force here acted in a manner altogether new to science, by direct mechanical impulse on the vanes—was almost universally accepted by even the most distinguished Physicists, further investigations of the most ingenious and elaborate nature have now conclusively proved that the action is really an indirect one, capable of being accounted for on previously understood principles.—I hold the

warning given by the history of this enquiry, in regard to the duty of the Scientific man to exhaust every possible mode of accounting for new and strange phenomena, before attributing it to any previously unknown agency, to be one of the most valuable lessons afforded by Mr. Crookes's discoveries.

Now I maintain that it requires exactly the same kind of specially trained ability, to elicit the truth in regard to the phenomena we are now considering, as has been exerted in the researches made by the instrumentality of the Spectroscope and the Radiometer. And I cannot but believe that if Mr. Crookes had been prepared by a special training in the bodily and mental constitution, abnormal as well as normal, of the Human instruments of the Spiritualistic enquiries, and had devoted to them the ability, skill, perseverance, and freedom from prepossession, which he has shown in his Physical investigations, he would have arrived at conclusions more akin to those of the great body of scientific men whom I believe to share my own convictions on this subject.

So far are we from regarding Science as having unveiled all the mysteries of Nature, that we hold ourselves ready to accept *any* new agency, the evidence for which will stand the test of cross-examination by skilled experts. But, in default of such evidence, we are fully justified by experience in regarding it as more probable that the most honest witnesses have either been intentionally deceived or have deceived themselves, than that assertions in direct contradiction to all the 'natural knowledge' we possess should have any real justification in fact.

In support of this position, I shall now show you that in every instance (so far as I am aware) in which a thorough investigation has been made into those 'higher phenomena' of Mesmerism which are adduced in support of Spiritualism, the supposed proof has completely failed, generally by the detection of intentional fraud; while as the unexplained marvels of the same kind which are still appealed to as valid proofs, rest on no better evidentiary foundation than seemed originally to be possessed by those which have entirely broken down, it may be fairly presumed that they too would be discredited by the like searching enquiry.

It was in France that the pretensions of Mesmeric *clairvoyance* were first advanced; and it was by the French Academy of Medicine, in which the mesmeric state had been previously discussed with reference to the performance of surgical operations, that this new and more extraordinary claim was first carefully sifted; in consequence of the offer made in 1837 by M. Burdin (himself a member of that Academy) of a prize of 3,000 francs to anyone who should be found capable of reading through opaque substances. The money was deposited in the hands of a notary for a period of two years, afterwards extended to three; the announcement was extensively published; numerous cases were offered for examination; every imaginable concession was made to the competitors, that was compatible with a thorough testing of the reality of the asserted power; and *not one was found to stand the trial.*

But not only was there complete and ignominious failure; the fraudulent mode in which the previous successes had been obtained was detected in two of the three cases which were brought most prominently forward, and was made scarcely less evident in the third.

The first case was presented by M. Houblier, a physician of Provence, who, after a long period of preparation, sent his *clairvoyante* Mlle. Emélie to Paris, to the care of a friend and mesmeriser, M. Frappart. This gentleman, before presenting her to the Commissioners, thought it as well to put her asserted power of reading with the back of her head to some preliminary trials; and soon finding reason to suspect her good faith, he set a trap for her, into which (supposing him to be her friend) she unsuspectingly fell. Very judiciously, however, he did not immediately expose her, but let her continue her performances; bringing up M. Houblier from Provence to meet other persons interested in the enquiry, that they might see for themselves through the key-hole of the room in which Mlle. Emélie was supposed to be lying entranced in a mesmeric sleep, that she got up and examined, here and there, the pages of the book —purposely left in the room—in which her alleged *clairvoyant* power was to be tested. Of course, Mlle. Emélie was never presented to the Commissioners of the Academy; and M. Houblier confessed with grief and shame that he had not only himself been for four years the dupe of this *maîtresse femme*, but that he had unconsciously helped her to impose upon

many most respectable persons in his own neigbourhood. Now, all these, with M. Houblier himself, might be presumed to have been both competent and trustworthy witnesses; so that if M. Burdin's prize had never been offered, this case would have been put on record (like others of which I shall presently tell you) as an unimpeachable attestation of the reality of *clairvoyance.* Again, the immediate detection of the fraud, not by a hostile sceptic, but by a friendly mesmeriser, shows how easily, under the influence of a 'prepossession,' numbers of intelligent people may be led to surrender their 'common sense' to the extent of believing, not only that the seat of vision may be transferred to the back of the head, but that a distinct picture of a page of a book can be formed without any optical apparatus. The conduct of M. Frappart in the matter should serve as a lesson to honest Spiritualists at the present time; who, when there is good ground to suspect trickery, would much better serve their own cause by helping to expose it, than by lending themselves to the defence of the trickster.

Among the earliest claimants of the Burdin prize was a M. Pigeaire of Montpellier; who affirmed that his daughter, a girl eleven years old, was able, when her eyes were completely blinded, to read with the points of her fingers, which then became her visual organs; the sole condition he required being that she should be blinded by himself with a bandage of black velvet. Her power of reading in this condition was attested by peers, deputies, physicians, distinguished *littérateurs* (amongst others by George Sand) and

newspaper editors, to whom it had been exhibited in Paris before she was presented to the Commission. But its members were nevertheless sceptical enough to require proof satisfactory to themselves, and desired to render the girl 'temporarily blind' (to use her father's words) by their own method; objecting that his velvet bandage might be so disarranged by the working of her facial muscles, as to allow her to see downwards beneath its lower edge, when the book was held in a suitable position. M. Pigeaire, however, objecting to this test, the Commissioners having satisfied themselves of the opacity of the bandage, stipulated only that the book should not be put into the girl's hands, to be held by herself wherever she wished, but should be placed *opposite* her eyes at any distance her father should desire. As he would not consent to this condition, the Commissioners, of course, declined to accept his daughter's performances as furnishing any valid evidence of *clairvoyance.* Though the bandage was opaque, the trick now became transparent; yet it had taken in peers, deputies, and George Sand; and only experts in such enquiries succeeded in discovering it.

The third case was brought forward by M. Teste, a well-known magnetiser of that date, who affirmed that every experienced mesmerist had witnessed the exercise of this faculty at least twenty times. Confident in his position, he offered to submit his *clairvoyante* (a young girl) to the *experimentum crucis*—the reading of print or writing enclosed in opaque boxes; stipulating only that the direction of the lines

should be previously indicated. Such a box was prepared and placed in the girl's hands, with the required indication. Being presently asked by M. Teste whether she would be able to read what was in the interior of the box, she answered *Oui*; and on his asking her how soon, she replied confidently *dix minutes*. She then turned the box about in her hands, and in doing so tore one of the bands that secured it. This being remarked upon, she made no further attempt of the same kind, but continued (as it appeared) to exert herself in fatiguing efforts to discern the concealed lines. Whole hours having thus passed, and M. Teste having asked his *clairvoyante* how many lines there were in the box, she answered *deux*. He then pressed her to read, and she announced that she saw the word *nous*, and later the word *sommes*. As she then declared that she could read no more, the box was taken from her hands, and the girl was dismissed; and the box being then opened, the printed slip it contained was shown to M. Teste to have on it six lines of French poetry, in which neither of the words *nous sommes* occurred.

Of course this failure does not *disprove* any of M. Teste's assertions, either in regard to the same girl under other conditions, or in regard to other alleged *clairvoyantes*; but it fully justifies the allegation, that as this was a picked case, presented by himself, near the expiration of the third year during which M. Burdin's prize was open, with unhesitating confidence in the girl's success, his other reported cases, of which not one rests upon better authority than his own,

have not the least claim upon our acceptance. He seems to have been very easily satisfied; and it is clear that if he was not a consenting party, he was not adequately on his guard against the possibility of a furtive peep being taken by his *clairvoyante* into the interior of the box while it was being turned about in her hands,—the method which Houdin avows himself to have practised in performing his 'second sight' trick, and by which, as I shall presently tell you, one of our own most noted advocates of the 'transcendental' was afterwards completely taken in.

It was in 1844 that the *clairvoyant* Alexis came hither from Paris, with the reputation of extraordinary powers; and though these had not been submitted to the test of investigation by the French Academy of Medicine, it was confidently affirmed by the leading mesmerisers in this country, that there was nothing in the way of 'lucidity' that this youth had not done and could not do. Not only had he divined the contents of sealed packets and thick wooden boxes, but he could give an exact account of the contents of any room in any house never before seen or heard of; he had described occurrences taking place at a distance, which, to the great surprise of the questioners (who expected something very different), were afterwards found to have transpired exactly as he had stated; he had revealed to persons anxious to recover important papers the unknown places of their lodgment; in fact, if all was true that was affirmed of him, the power for which he could claim credit would have been little less than omniscience—if only it

could have been commanded at will. But, by the admission of his best friends, it was extremely variable, coming in gushes or flashes; while, as he was often unable to see clearly at first, and had an unfortunate habit of 'thinking aloud,' he continually made a great many blunders before he arrived at anything like the truth.

Having myself settled in the neighbourhood of London just as Alexis came over, and having found my friend Dr. Forbes (then editor of the *British and Foreign Medical Review*) extremely interested in the enquiry into the reality of his asserted *clairvoyant* powers, I accompanied Dr. F., time after time, to public and private *séances* at which these powers were *exhibited*, though not adequately *tested*. So far from being at that time an opponent, I was much more nearly a believer; the weight of testimony seemed too strong to be overborne; and it was only after repeated experience of the numerous sources of fallacy which the keen-sightedness of Dr. Forbes enabled him to discern, that I became, like him, a sceptic as to the reality of Alexis's reputed *clairvoyance*. My scepticism was increased by seeing how, whilst he was 'thinking aloud' (according to his friends) but 'fishing' or 'pumping' (according to unbelievers), he was helped by the information he gleaned from the unconscious promptings of his questioners. And my confidence in testimony was greatly weakened, by finding that extraordinary successes were reported to have been obtained in some cases which Dr. Forbes and I regarded as utter failures, as well as in others

in which it was clear to us that no adequate precautions had been taken to prevent the use of ordinary vision. For we satisfied ourselves that when he was going to read or to play cards with his eyes bandaged, it was his habit so to manœuvre, as to prevent the bandage from being drawn tight,—*cela m'étouffe* being his constant complaint, even when his nostrils were left perfectly free; and that when he could not see under its lower edge at first, he worked the muscles of his face until he displaced it sufficiently for his purpose. And thus we came to the conclusion that no test of his 'lucidity' could be of any value, which did not involve the reading of print or writing enclosed in perfectly opaque boxes or other envelopes, without the assistance of any response to his guesses. A *test-séance* of this kind having been arranged by Dr. Forbes at his own house, the general result (as admitted by M. Marcillet, the mesmeriser who accompanied Alexis) was *utter failure*; the only noteworthy exception being in a case in which, having selected the thinnest of the paper envelopes, Alexis correctly stated that the word within it consisted of three letters, without, however, being able to name them. And the value of even this very slight success was afterwards completely neutralised by the discovery, which I shall recount in connection with the case of the brother and successor of Alexis, that nothing else than ordinary vision was required to obtain it.

As M. Marcillet could not dispute the fairness with which the investigation was conducted, he could

offer no other explanation of Alexis's failure on this occasion, than the presence of an 'atmosphere of incredibility' emanating from the persons of the sceptical doctors present. It may be shrewdly suspected, however, that Alexis recognised the presence of a *maître homme* in *clear-sightedness*, and felt himself foiled at every point by the keener intelligence of Dr. Forbes. For he and M. Marcillet forthwith left London for Paris, and never publicly reappeared in this country.

His place, however, was taken after a year or two by his brother Adolphe, whose powers were highly vaunted by believers as even surpassing those of his predecessor. Again Dr. Forbes applied himself to the investigation; and again I took every opportunity afforded me of witnessing their exercise. It was at a public *séance* at which I was myself present, though Dr. Forbes was not, that a circumstance occurred which made at the time considerable impression. Slips of writing-paper having been distributed, any person who wished to put Adolphe's power to the test was desired to write a word at the top of the slip, and then to fold it over and over several times, so that the writing should be covered both in front and behind by two or three layers of the paper. Having myself written *Paris*, I folded it up in the prescribed manner; my friend Mr. Ottley wrote *Toulon*; several other persons did the like; and we satisfied ourselves, by holding up our folded slips between our eyes and the light, that the writing within was completely invisible. Yet, taking one of them after another into his

hands, and making no attempt to unfold the papers (some of which, I think, were secured by seal or wafer), Adolphe named, without hesitation, the word written on each. Within a day or two, however, I learned from Mr. Ottley that his sister had discovered that she could read by her natural eyesight the writing on his slip, which it was supposed could only be discovered by *clairvoyant* power; and on trying her method upon my own slip, I found myself able to do the same. The secret consisted in holding the slip, not *between* the eye and the light, but in such a position that the light of the window or lamp should be reflected obliquely from its surface. And any of you will find that after a little practice, words written in a legible but not large hand can be thus read, though covered by three folds of ordinary writing-paper. This discovery fully accounts for various successes, as well of Alexis and Adolphe, as of other reputed clairvoyants; and affords a further warning as to the scrupulous care required to exclude all possible sources of fallacy in conducting such trials.

The conclusions drawn by Dr. Forbes from his critical examination of Adolphe's pretensions, tallied exactly with those to which he had been led by his previous search. All the instances of *success* could be fairly explained without crediting the performer with any extraordinary powers; where, on the other hand, due care was taken to render the ordinary operation of the visual sense impossible, *failure invariably resulted.* Thus the claims of Adolphe, like those of Alexis, vanished into thin air at the wand of the ex-

pert ; and, notwithstanding the great efforts made to rehabilitate his reputation, he soon found his stay in London no longer profitable, and went the way of his predecessor. Nothing, so far as I am aware, has ever been since heard of this *par nobile fratrum* ; certainly they never challenged the French Academy of Medicine to an investigation of their pretensions.

Another case of this kind was tested a few years later by Mr. Braid. In 1852 M. Lassaigne and Mdlle. Prudence Bernard, who had gained a great reputation in London by their performances at Hungerford Hall, having come to Manchester, Mr. B. went, at the desire of a friend in Edinburgh, to test the lady's *clairvoyant* pretensions. The first part of the performance consisted of feats which might be readily explained by a system of collusion ; not being so remarkable as those which M. Robin and his female confederate accomplished by means so simple, that the performer of them could scarcely refrain from laughing at the ease with which the public could be deceived.

" But now arrived," continued Mr. Braid, " the experiment which I considered by far the most interesting of all on the programme,—viz., playing at cards, and reading, when her eyes were to be so securely blindfolded that not a ray of light could reach them, in the common acceptation of the term. To effect this, folds of cotton wadding were placed across the forehead, eyes, and nose, and over the face as far as the point of the nose ; and then a white handkerchief folded several times, so as to be about 2½ inches wide, was bound round the head and eyes, so as to main-

tain the cotton in its place. This done, M. Lassaigne triumphantly asked anyone to examine his subject, and say whether it was *possible* for her to see through all this apparatus. Some one having exclaimed 'No,' the lady sat down at a table to challenge any one present to play a game at cards with her. Whilst they were making arrangements for the game, I was sufficiently clairvoyant, even without being mesmerised, to observe the lady pensively lay her face upon her hands, so as to enable her very conveniently, and *by mere accident no doubt*, to give the proper twist and finish to the apparatus for *excluding* light from her eyes. I observed this manœuvre by the lady *twice*, and called the attention of some friends to it, who can also testify to the fact. The clairvoyante now became very lively; described the personal appearance of her opponent, played dexterously, and beat him. She also did the same by another gentleman who tried a round with her; and with a third gentleman, a friend of my own, who, by my suggestion, had taken a *new* pack of cards with him, she proved her power of describing his personal appearance correctly, and playing well, but she lost on this occasion from having bad cards.

"As the lady was now considered to have proved her clairvoyant powers to the satisfaction of all present, I stepped forward and announced my desire to have the privilege of applying a test which would be far more satisfactory to *my* mind, because I had no confidence in the supposed efficacy of the blindfolding then in use for effectually accomplishing what it pro-

fessed to do. I told the audience that I felt convinced that the patient was seeing through interstices between the cotton and the face, near the side of the nose. My proposal for guarding against such a source of fallacy as this, was simply to place a thin sheet of brown cardboard under her chin and round her neck, so as to guard against the possibility of the deception which I suspected. This I intended to have accomplished by tying the sheet of pasteboard around her neck, proceeding from the bottom of the throat upwards in a conical form, after the fashion of the Elizabethan frill, extending considerably higher than the head, so as to prevent the possibility of her raising her hands or lowering her head sufficiently for seeing over it, without exciting the attention of the audience. Indeed, whoever had had the opportunity of observing the clairvoyante, as I did, during this card scene, must have felt that he would be permitting an insult to be perpetrated upon himself and upon the whole audience, were he not to endeavour to expose what appeared to me to be such an absurd farce. I was aware that my test would be objected to, on the ground that she did not profess to read *through cardboard* (although I must confess my surprise that a person who can see and read through stone or brick walls, should not be competent to penetrate through thin cardboard), so I, therefore, offered to remove that objection, by cutting out a piece of the cardboard and covering the hole with the cotton wadding and folded handkerchief which *she actually professed to see through;* but, although the audience were

almost unanimous in their opinion that my proposed test was a fair one, and such as they wished to see tried, M. Lassaigne well knew that it was too certain and obvious a mode of testing to answer his purpose, and, therefore, under various pretexts, and in a most rude manner, he absolutely refused to try it. I therefore withdrew from the platform and left the room, feeling the force of the remark,—'*Ex uno disce omnes.*'"[1]

And so it always proves *in the end* with these *sham* marvels; which, however specious they may appear at a distance, vanish under critical investigation like the *mirage* of the desert on nearer approach. The *real* marvels of Science, on the other hand, not only stand the test of the most critical examination, but prove more marvellous the more thoroughly they are investigated. Reason, it has well been said, can guide where Imagination scarcely dares to follow. And those who desire to find a true spring at which to slack their thirst for knowledge, need only follow the guidance of the Spectroscope and the Radiometer, to be led to wonders of which neither the 'Poughkeepsie Seer,' the 'Seeress of Prevorst,' nor any other of the reputed 'prophets' of Mesmerism or Spiritualism had ever dreamed.

My anxiety to impress on you the lessons which (as it seems to me) such exposures ought to afford in regard to the object of our present enquiry, leads me to ask your further attention to two other cases; in each of which a number of apparent successes of a most remarkable kind were obtained by what was subse-

[1] See Braid on *Magic, Witchcraft, Animal Magn tism, Hypnotism, and Electro-Biology*, 1852; p. 115.

quently shown to have been an ingenious fraud, practised upon the honest patron of the performer, who was (like M. Houblier) his unsuspecting dupe.

In the course of his further search for *clairvoyance*, Dr. Forbes was requested by a legal gentleman whom he calls Mr. A. B., to witness the performances of a copying clerk in his employ, by name George Goble; whom he stated to be capable, in a large proportion of cases, of reading printed words enclosed in opaque boxes, without either mistake or preliminary guessing. Being at that time in the country, I did not accompany Dr. Forbes in his repeated visits to Mr. A. B.'s chambers; but I well remember his writing to me in some excitement after the first of them, that at last he seemed to have got hold of a genuine case of *clairvoyance*. He soon, however, recovered his equanimity and his scepticism; and felt that he must make a much more thorough enquiry, before he could be justified in accepting the case as genuine. George's 'dodge' consisted (as was subsequently proved) in furtively opening the box or other envelope, so as to get a peep at its contents, whilst sitting or lying face-downwards on a sofa; and in managing to conceal his having done so, by tearing open the box at the moment he proclaimed the word: his failures occurring when the box was so secured that he could not succeed in opening it, after manœuvring (it might be) for half an hour or more. Finding that in every one of George's *successes* the envelope *might* have been opened, whilst all the cases in which the boxes had certainly *not* been opened were *complete failures*—a consideration which, though

very obvious, seemed never to have suggested itself to the legal mind of George's patron—Dr. Forbes and Professor Sharpey (whom he had taken into council) devised a simple 'counter-dodge,' by which it should be rendered impossible for George to open the box for the purpose of reading the contained word, without the detection of his trick. This entirely succeeded; George was brought upon his knees and confessed his roguery, but protested that it was his first offence. You would scarcely credit the fact if it had not been self-recorded, that George's patron still continued to believe in his *clairvoyant* power; accepting his assurance that he had only had recourse to trickery when the genuine power failed him, and requesting Dr. Forbes to give him another trial. This Dr. F. consented to make, upon the sole condition that a small sealed box, containing a single word printed in large type, should be returned to him *unopened* with the word written upon the outside of it. Some days elapsed before George's 'lucidity' recovered from the shock of the exposure; but his master then informed Dr. F. that he had read the word IMPLEMENTS, or, as he spelled it, *impelments*, with great assurance of correctness. This, however, proving altogether wrong, the box was left in Mr. A. B.'s hands for a further space of two months; and no second guess having been then made, the real word was disclosed by Dr. F. to be OBJECTIONS.

The history of this enquiry, as detailed by Dr. Forbes,[1] brings into the strongest contrast the patient

[1] *Illustrations of Modern Mesmerism from Personal Investigation*, London (Churchill) 1845, Third Series, pp. 63-89.

and honest search for truth of the cautious sceptic, willing to be convinced if satisfactory evidence could be adduced, and the easy credulity of the enthusiastic disciple, who not only eagerly accepted a conclusion opposed to universal experience, without taking any adequate precautions against trickery, but held to that conclusion after the trick had been not only exposed but confessed. And here, again, we see how, but for the interposition of a sceptical 'expert,' a case of sham *clairvoyance* would have been published to the world with the same unhesitating affirmation of its genuineness, as that which now claims credit for the exercise of 'Psychic Force' in causing accordions to play, and heavy tables to turn round or even to rise in the air, without muscular agency.[1]

In the other case I have now to mention—that of Mr. Hewes' 'Jack,' publicly exhibited at Manchester about the same time that Alexis was performing in London—the proof of *clairvoyance*, as shown in reading when the eyes had been effectually closed, seemed as complete as it was possible to obtain. Jack's eyelids were bound down by surgeons of that town (who were assuredly not confederates) with strips of adhesive plaster, over which were placed folds of leather, which again were kept in place by other plasters; the only condition made by Mr. Hewes being that the ridges of the eyebrows should not be covered, as it was there that Jack saw when 'lucid.' The results were truly surprising; there was no guessing, no need of prompting, no failure; 'Jack' read off, without the

[1] See Serjeant Cox's letter in the *Spectator*, Nov. 11, 1876.

least hesitation, everything that was presented to him. The local newspapers were full of this new wonder; and no documentary testimony in favour of *clairvoyance* could possibly be more conclusive. But, as usual, the marvel would not stand the test of close examination. A young Manchester surgeon, who had been experimenting upon himself, gave a public exhibition of his power of reading when his eyes had been 'made up' in precisely the same manner as 'Jack's,' and by the same gentlemen; the means he adopted being simply to work the muscles of his face, until he so far loosened the plasters as to obtain a crevice through which he could read by looking upwards. Mr. Hewes, who witnessed this performance, readily agreed that 'Jack' should be further tested; and it was settled, *en petite comité*, that after protecting his eyelashes with narrow strips of plaster, his eyelids should be covered with a thick coating of shoemaker's wax, leaving the superciliary ridges free. When this was done (not without considerable resistance on the part of 'Jack,' only kept under by the influence of his patron) the *clairvoyant* power was completely annihilated; but one thing 'Jack' plainly saw, even with his eyes shut—that 'his little game was up.' His patron, a gentleman of independent fortune, who had become an active propagandist of the belief he had honestly embraced, returned all the money which had been received for 'Jack's' performances, and 'Jack' withdrew into private life.

Now I readily concede that neither the detection of 'Jack' and George Goble, nor the failure of Alexis

and Adolphe under test-conditions, disproves the reality of *clairvoyance*; but my position is, that since the choicest examples of its manifestation are found to break down when thoroughly investigated, not one of the reported instances in which *no* such thorough investigation has been made, has the least claim to be accepted as genuine. It must, I think, have become abundantly obvious to you, that until the existence of the *clairvoyant* power shall have been established beyond question, by every test that the skill of the most wary and inveterate sceptic can devise, the scientific expert is fully justified in refusing to accept the testimony of any number of witnesses, however honest, but of no *special* intelligence in regard to the subject of the enquiry, as to particular instances of this power. George Goble's master would have recounted the performances of his *protégé* in perfect good faith, and would have been very angry with anyone who should express a doubt either of his veracity or his competence. And not only Mr. Hewes, but a large body of lookers-on, would have stoutly contended for the impossibility of 'Jack' having read with his eyes, when they had been carefully covered by a surgeon with plasters and leather. But to me it seems the 'common sense' view of the matter, that the fact of 'Jack' having read with his eyes covered, should have been accepted as a proof—not of his *clairvoyance*—but of his eyes *not* having been *effectually* covered; and that the very fact of George Goble having found out the words in certain boxes which he *might* have opened, while he did not

find out any in the boxes he *could not* open, should have been accepted as valid evidence—not of his *clairvoyance*—but of his having taken a furtive peep with his natural eyes into the unsecured boxes. And in each case, 'common sense' would have been justified by the result.

The ordinary rules of Evidence, as I have endeavoured to show you, apply only to ordinary occurrences. To establish the reality of such an extraordinary condition as *clairvoyance*, extraordinary evidence is required; and it is the entire absence of this, which vitiates the whole body of testimony put forward by Prof. Gregory (*Letters on Animal Magnetism*), doubtless in the most complete good faith, regarding the performances of Major Buckley's *clairvoyantes*; whom he states to have collectively read the mottoes enclosed in 4,860 nut-shells (one of them consisting of 98 words), and upwards of 36,000 words on papers enclosed in boxes, one of these papers containing 371 words. Now, that Professor Gregory lent not only himself, but the authority of his public position, with reprehensible facility, to the attestation of Major Buckley's statements, might be fairly anticipated from his eager endorsement of Reichenbach's doctrines, and his credulous acceptance of Mr. Lewis's claims, of which I spoke in my previous lecture; and the complete untrustworthiness of his statements in regard to *clairvoyance* becomes obvious to any sceptical reader of his 'Letters.' For not only is there an entire absence of detail, in regard to the precautions taken to prevent the ingenious tricks,

to which (as all previous experience had indicated) the claimants to this power are accustomed to have recourse ; but the narrative of one of his cases shows such an easy credulity on the very face of it, as at once to deprive his other statements of the least claim to credence. I refer to that (*Op. cit.*, p. 364) in which folded papers or sealed envelopes were forwarded to the *clairvoyantes*, who returned them—the seals apparently unbroken—with a correct statement of the contained words. Now the unsealing of sealed letters, and the resealing them so as to conceal their having been opened, are practised on occasion in the Post-office of probably every Continental capital, if not in our own ; and, as some of you have probably seen in the public prints, the doings in this line of a 'medium' who professed to be able to return answers under spiritual influence to questions contained in sealed letters, have lately been exposed in the Law-courts of New York ; the medium's own wife disclosing the manner in which the unsealing and resealing of these letters were effected. Common sense, it might have been thought, would dictate that if the contents of a sealed letter had been made known by a person in whose possession it had lain, that letter had been opened and resealed. Yet Prof. Gregory prefers to believe that these letters had been read by *clairvoyance* ; and numbers of persons in various parts of the Union, including many of high social consideration, were found to have placed such confidence in the 'spiritual' pretensions of the New York swindler, as to submit to him questions of the most private

nature, with fees that gave him an annual income of more than a thousand pounds!

It was to put the value of Professor Gregory's evidence in support of *clairvoyance* to the test, that his colleague, Dr. (afterwards Sir James) Simpson, offered a bank-note of large value, enclosed in a sealed box and placed in the hands of a public official in Edinburgh, as a prize to anyone who could read its number; and I am informed by Sir Dominic Corrigan, M.P., that Sir Philip Crampton (Surgeon to the Queen in Ireland) did the like in Dublin. Though these rich prizes remained open to all comers for at least a year, none of Major Buckley's one hundred and forty-eight *clairvoyantes* succeeded in establishing a claim to either of them; in fact, I believe that not even a single attempt was made. And yet there are even now men of high scientific distinction, who adduce Professor Gregory's testimony on this subject as unimpeachable![1]

Still more akin to the powers claimed for Spirit-

[1] It was publicly suggested by Mr. Wallace at the Glasgow Meeting of the British Association, that the failure of the *clairvoyantes* in the case of Dr. Simpson's bank-note might be due to there having been really no note placed in the box. This suggestion I indignantly repudiated at the time, as an unworthy imputation upon the character of a public man whose honesty was above all suspicion. But I might have replied that if the fact had been so, some of Major Buckley's 148 *clairvoyantes* ought to have found it out. Dr. Simpson informed me that Dr. Gregory, on being asked the reason of their complete abstention, could give no other account of it, than that the very offer of the reward, by introducing a selfish motive for the exercise of this power, prevented its access; as if Alexis, Adolphe, and numerous other professors of the art of reading without eyes, had not been daily practising it for the purpose of pecuniary gain.

ualistic 'mediums,' is that form of alleged Mesmeric *clairvoyance* which consists in the vision of scenes or occurrences at a distance ; so that they are described exactly as they are at the time, and not according to the expectation of the questioners. Numerous cases of this kind have been very circumstantially recorded ; and I most freely admit that a body of thoroughly well-attested and well-sifted evidence in their favour would present a strong claim to acceptance. Every one knows, however, that plenty of marvels of the same class have been current as 'ghost stories ;' and that even some of what were regarded as the best attested of these, have faded out of the credit they once enjoyed, under the advancing light of a healthy rationalism. And while such as have a 'transcendental' turn of mind will accept the most wonderful story of *clairvoyance* at a distance with little or no hesitation, those of a more sceptical habit will admit none that has not been subjected to the test of a searching cross-examination ; thinking it more probable that some latent fallacy is concealed beneath the ostensible facts, than that anything so marvellous should have really happened.

My own attention was very early drawn to this subject by certain occurrences which fell under my immediate observation. A Mesmeric 'somnambule' said to be possessed of this power of 'mental travelling' being the subject of a *séance* at my own house, and being directed to describe what she saw in the rooms above, gave a correct and unhesitating reply as to the occupants of my nursery ; whilst in regard to the

very unusual contents of a store-room at the top of the house, she was entirely at fault, until I purposely prompted her by leading questions. The next day I found out that she had enjoyed ample previous opportunities of information as to the points which she had described correctly; whilst it soon came to my knowledge that a most circumstantial narrative was current in Bristol (where I then resided) of her extraordinary success in discerning in the store-room the very objects which she had entirely failed to see. Here, then, was a marked instance of two sources of fallacy in narratives of this description: first, the disposition to attribute to 'occult' agencies what may be readily explained by natural causes; and second, the 'myth-making' tendency—far more general than is commonly supposed—which, as I have already shown you, builds up the most elaborate constructions of fiction upon the slenderest foundation of fact.

In my interviews with Alexis and Adolphe, also, both of whom were reputed to possess a very high degree of this power, I tested them as to the contents of my house, which they described in a vague and general way that would apply to almost any ordinary domicile. But both of them spoke of my drawing-room as having pictures on its walls, which was not then the fact; and neither of them, though pressed as to something very conspicuous which they could not help seeing, gave the least hint of the presence of an organ with gilt pipes. Their failure with me does not, of course, invalidate any *real* successes they may

have gained with others; but my previous experience had led me to entertain grave doubts as to the reality of the *reputed* successes; and these doubts were subsequently strengthened by the complete breakdown, under the persevering and sagacious enquiries prosecuted by Dr. Forbes, of a most notable case which excited great public interest at that time.

The wonderful performances of Miss Martineau's servant J., which she announced to the public in 1844, through the medium of the *Athenæum*, culminated in a detailed description—given by J. in the mesmeric sleep—of the particulars of the wreck of a vessel of which her cousin was one of the crew, as also of the previous loss of a boy overboard; with which particulars it was positively affirmed by Miss Martineau, and believed by many on her authority, that the girl could not possibly have been previously informed, as her aunt had only brought the account to the house when the *séance* was nearly terminated. On being asked, says Miss M., two evenings afterwards, when again in the sleep, "whether she knew what she "related by seeing her aunt telling the people "below," J. replied "No; I saw the place and the "people themselves—like a vision." And Miss Martineau believed her.

My sceptical friend, Dr. Forbes, however, would not pin his faith to hers; and determined to institute, through a Medical friend on the spot, a more searching investigation than Miss Martineau had thought necessary. The result of this enquiry was to prove, unequivocally, that J.'s aunt had told the whole story

to her sister, in whose house Miss M. was residing about *three hours before the séance*; and that, though J. was not then in the room, the circumstances were fully discussed in her presence before she was summoned to the mesmeric performance.[1]—Thus not only was J. completely discredited as a seer; but the value of *all* testimony to such marvels was seriously lowered, when so honest and intelligent a witness as Harriet Martineau could be so completely led astray by her 'prepossession,' as to put forth statements as facts, which were at once upset by the careful enquiry which she ought to have made before committing herself to them.

It is the wise rule of our law, that no Evidence (save that of dying declarations) is admissible in Court, that is not capable of being tested by cross-examination; and no well-trained investigator will put forth a new discovery in Science, until he has verified it by 'putting it to the question' in every mode he can think of.

If, in the case I have just cited, the 'common sense' view had been taken from the beginning, the correspondence of J.'s circumstantial narrative with the actual facts of the case, would have been accepted as proving—not that she had received them in Mesmeric vision—but that she had learned them through some ordinary channel; and the truth of this conclusion would have at once become apparent, when the proper means were taken to verify it. The same

[1] *Illustrations of Modern Mesmerism*, pp. 91–101.

ground should (I contend) be taken in regard to all the marvels of this class which rest on the testimony of believers only. For no one of them is better attested than that which I have just cited; and until the evidence in support of any case of *clairvoyance* can be shown to have been sifted in the same thorough manner, I maintain that it has no more claim on our acceptance, than has the specious 'opening' of a case in a Court of Law, before it has been subjected to the hostile scrutiny of the counsel on the other side.

TABLE-TURNING AND TABLE-TALKING.

I need not detain you long with the scientific discussion of the phenomena of *Table-turning* and *Table-talking*; since no facts have been established in regard to them, which are not susceptible of a very simple explanation. A number of persons seat themselves round a table, and place their hands upon it, with a preconceived idea that the table will turn; and after some time, it may be, during which the movement has been attentively waited for, the rotation begins. If the parties retain their seats, the turning only takes place as far as the length of their arms allows, but not unfrequently they all rise, feeling themselves obliged (as they assert) to *follow* the table; and, from a walk, their pace may be accelerated to a run, until the table actually spins round so fast that they can no longer keep up with it. And since this happens, not merely without consciousness on the part of the performers that they are exercising any

force of their own, but for the most part under the full conviction that they do not;—and, moreover, as tables thus move, which the performers declare themselves unable to move to the same extent by any voluntary effort;—it is not unnatural that they should conclude that *some other force* than their own Muscular action must have put it in motion.

But the man of science, whether Physicist or Physiologist, cannot rest content without adequate proof of this conclusion; and a test is very easily applied. You see here a little apparatus consisting of two pieces of board, two cedar pencils, two india-rubber bands, two pins, and a slender index-rod, which was devised by Faraday to ascertain whether the table ever moves round without a lateral pressure from the hands of the operators. For this 'indicator' is so constructed, that when the hands are placed upon it, instead of resting immediately on the table, any lateral pressure exerted by them makes the upper board roll upon the lower; and the slightest movement of this kind is so magnified by the leverage of the index, as to show itself by a very decided motion of its point in the opposite direction. By this simple test, anyone may experimentally satisfy himself that the table never goes round unless the index of the 'indicator' shows that lateral muscular pressure is being exerted in the direction of its movement; and, conversely, that when such lateral pressure, as shown by the 'indicator,' is being adequately exerted, the table moves round. The Physicist, therefore, has a right to assert, that, until a table shall be found to turn *without* lateral pressure of the hands laid upon

the 'indicator,' as shown by the fixity of its index, *there is no evidence whatever of the exertion of any other force than the Muscular action of the operators.* And the Physiologist, who is familiar with the fact that every human being is continually putting forth a vast amount of muscular energy, of the exercise of which he is entirely unconscious, and who has also studied that unconscious influence of mental preconception of which I have already given you illustrations in the *pendule explorateur*, at once perceives that the absence of any consciousness of exertion on the part of the operators, affords no proof whatever that it is not being put forth; while he is further well aware that *involuntary* muscular contractions are often far more powerful than any which the *will* can excite.

The same explanation applies to the tilting of the table, which is made in response to questions asked of 'the spirits' by which it is supposed to be influenced. Nothing but a strange prepossession in favour of some 'occult' agency, can attribute such tilting to anything but the *downward* pressure of the hands laid upon it; the hypothetic exertion of *any other* force being scientifically inadmissible, until it shall have been experimentally shown that the table tilts without being manually pressed down. An 'indicator' might be easily constructed, which should test *downward* pressure, on the same principle that Faraday's indicator tests *lateral* pressure; but no one, so far as I am aware, has ever ventured to affirm that he has thus demonstrated the *absence* of muscular pressure, although I long since pointed out that only in

this manner could the matter be scientifically tested. Until such demonstrations shall have been given, the tilting—like the turning—of tables, may be unhesitatingly attributed to the unconscious muscular action of the operators; while the answers which are brought out by its instrumentality may be shown to be the expressions, either (like the movements of the *pendule explorateur*) of ideas actually present to the mind of one or other of the performers; or (as often occurs in Somnambulism and other allied states) of past ideas which have left their traces in the brain, although they have dropped out of the conscious memory.

That such is the nature of the responses ordinarily obtained by those who (in entire good faith) have practised this 'curious art' in any of its varied forms — including planchette-writing — is shown by the analysis of a number of cases observed by myself and recorded by others.[1] And there is this very curious indication of it: that when the 'table-talking' epidemic first spread in this country, a number of Low-church Clergymen, strongly imbued with the belief that it was a manifestation of Satanic agency, put to the tables a series of what they regarded as 'test' questions, and got just the answers they expected.[2]

SPIRITUALISM.

I now come to the existing phase of the Epidemic belief in the 'occult,' which, as I have already pointed out, differs from the preceding rather in its outward manifestations than in its essential nature. You have

[1] *Appendix L.* [2] *Appendix M.*

all heard of the ghostly visitations, which, in the days of our ancestors, were reputed to have disclosed by means of raps the places in which treasure had been hidden, or a murdered corpse had been buried. Ghosts, however, like witchcraft, seem to have lost credit with the present generation, until brought into vogue again as 'spirits' by the Rochester rappings. A family of the name of Fox, including two girls aged respectively about *nine* and *eleven* years, went to inhabit a house at Hydesville (Rochester County, New York State), in which a murder was said to have been committed many years before. They had not resided in it long, when raps were heard in the girls' chamber; sometimes obviously issuing from their persons, but sometimes apparently proceeding from other parts of the room. Curiosity was excited; the neighbourhood flocked to witness the marvel; no one could detect any movement on the part of either of the girls while the raps were sounding; and no concealed instrumentality could be discovered by careful search. The rappings soon began to show a certain coherence; a code of signals was arranged, according to which one rap was to mean *no*, three raps *yes*, and two raps *doubtful* or *wait*; and communications having been thus opened with the rappers, visitors were enabled, through the medium of these two girls, to summon and interrogate the 'spirits' of their departed friends. Multitudes now flocked from all parts to witness the phenomena; and the girls having gone to live with an elder married sister at Rochester-town, the alphabetical system was established at her suggestion; which enabled the

'spirits' to spell out their messages by rapping at the required letters, when either the alphabet was repeated by the enquirer, or the letters on an alphabet-card were successively pointed to. The excitement continuing to increase, a Committee of Investigation was appointed by a town-meeting. Every opportunity was given for the enquiry; but the committee was completely baffled. The enquiry was taken up, however, by an eminent anatomist, Dr. Austin Flint, of New York; who, having first convinced himself that the sounds issued from the legs or feet of the girls themselves, notwithstanding their apparent stillness, sought for a physiological explanation of them; and soon found one in the power which certain persons can acquire, of giving a jerking or snapping action to particular tendons of either the knees, ankles, or toes,—a patient of his own being able thus to produce an exact imitation of the Rochester rappings. Dr. Austin Flint's explanation subsequently received full confirmation from Professor Schiff, since of Florence, who not only himself acquired the power of producing the raps, by the repeated displacement of a tendon which slides through a sheath behind the external protuberance of the ankle, but exhibited this acquirement to the French Academy of Medicine in April, 1859, baring his legs, and producing the raps without any apparent movement. And not more than six years ago, Mrs. Culver, a female relative of the Fox family, made a deposition before the magistrates of the town in which she resided;[1] stating that while visiting the

[1] *Appendix N.*

girls at Rochester many years before, she had become acquainted with the entire secret, which she fully disclosed; and herself reproducing the raps in verification of her narrative.

But the very rationality of this explanation caused it to be disbelieved by such as were anxious to be placed in communication with 'the spirit world.' The fame of the Fox girls spread through the United States; they established themselves as 'mediums' in New York; and before long they were drawing a large income from the pockets of their credulous visitors.

Under the fostering influence of pecuniary temptation, imitators of the Fox girls soon sprang up in various parts of the United States; 'mediums' became numerous; and one of them, Mrs. Hayden, brought the contagion to this country, where the 'spirit-rapping' Epidemic rapidly spread. The manner in which, according to the experience of those who witnessed Mrs. Hayden's performances (subsequently confirmed by Mrs. Culver), the 'medium' divined at what letters to make the raps, was very simple; consisting merely in carefully watching the countenance or gestures of the questioner, who almost invariably gives, in some way or other, involuntary expression to his or her expectancy. Of this I could cite many proofs. An eminent scientific friend told me that having been at a party by one member of which after another Mrs. Hayden's powers were tested, he was at first greatly surprised at the accuracy of the replies he obtained regarding the name, date of death, and

place of death, of a deceased friend of whom he was thinking; but that he soon obtained a clue, by observing that her success varied with the demonstrativeness of the individual, and that she utterly failed with one of peculiarly imperturbable habit. He then made a fresh trial, with the fixed predetermination to withhold any manifestation of his expectancy; and Mrs. Hayden was completely baffled. The secret was divined also by Professor Edward Forbes, who, by pausing on particular letters, made Mrs. Hayden spell 'Lord Tomnoddy' and other waggeries. And the most complete exposure of the trick was given by Mr. G. H. K. Lewes; who caused Mrs. Hayden to rap out the most absurd replies to questions which he had previously written down and communicated to another member of the party; finally obtaining, in answer to the question 'Is Mrs. Hayden an impostor?' three unhesitating raps at the letters Y, E, S.[1]

In the 'Report on Spiritualism of the Committee of the London Dialectical Society,' you will find that Dr. Edmunds, the chairman of that Committee, not only detected a well-known professional 'medium' in making the raps with her foot, but observed that she regulated her raps by intently watching the questioner, and that when she was prevented from doing this by the interposition of a screen, her raps were altogether

[1] Mr. Wallace explains this result by assuming that the raps were caused by 'invisible beings,' who, reading what was in the questioner's mind, answered a fool according to his folly. Where the folly lies, the readers of Mr. Wallace's letter (*Appendix O*) will judge for themselves.

meaningless. My own experience with other 'mediums' has been to exactly the same effect.[1]

Of the 'higher phenomena' of Spiritualism—the 'levitation' of chairs and tables, and even of men and women; the 'elongation' of Mr. Home's body, his handling of heated bodies, and his heaping hot coals on the head of a bald gentleman without any discomfort to him; the untying of knots and change of coats; the production of 'spiritual photographs;' the bringing-in of fruits, flowers, or live lobsters, in dark *séances*; and the like—I have left myself no time to speak. The very catalogue speaks, to any sober and unprepossessed mind, of the extreme improbability that any 'spiritual' agents should so manifest their presence. And in regard to the spirit-writing by pens or pencils, I can only say that of the revelations given by its means, I have seen none that could claim any higher character than that of unmitigated 'twaddle.' It is because the present generation knows little of the history of former Epidemics of this kind, and is therefore not in a position to profit by the experience they have afforded, that I have rather dwelt in these lec-

[1] *Appendix P.*—Much stress is laid by the Editor of the *Spectator*, and by Mr. Wallace, upon a statement made by the late Professor De Morgan, that Mrs. Hayden's success was *not* interfered with by the interposition of a screen. But I have it on the authority of an eminent Scientific colleague of Professor De Morgan's, who was repeatedly present at the spiritualistic *séances* held at his house, that the experiments were habitually conducted there in so loose a manner as to be altogether unsatisfactory; frauds of the most transparent kind (which my friend himself more than once exposed) being accepted as valid proofs; and non-natural interpretations being always preferred, when natural explanations were obvious.

tures on the lessons of the past in regard to the *credibility of testimony* on these subjects, than discussed the truth or falsehood of statements now in currency in regard to the recent doings of 'the spirits.' It is not because I have not investigated Spiritualism for myself, that I refrain from bringing before you in detail the results of my own enquiries. At the outbreak of the Epidemic I devoted to the examination of its pretensions an amount of time and attention which might have been far more profitably employed; and I did not give up the enquiry until I had satisfied myself, by long and careful study, that its character was fundamentally the same with that of the epidemics I had previously witnessed, differing only in the particular form of its manifestations. I could not afford to sacrifice the time that might be much more profitably spent in adding to our stock of real knowledge, in the (so-called) scientific investigation of such performances as those of the 'Davenport Brothers;' when I found that the investigation was to be so carried on, that I should be precluded from using either my eyes or my hands, the most important instruments of scientific enquiry. I felt assured that these performances would turn out to be mere conjuring tricks: and that they really are so has been shown, not merely by Mr. Maskelyne's discovery of the secret, and his repetition of the performances *as* conjuring tricks, but by the recent public *exposé* of the whole method, in Boston (N.E.), by one who formerly practised it for gain. So, again, in other cases in which I strongly suspected the supposed 'spiritualistic'

manifestations to be intentional deceptions, and proposed their repetition under test-conditions admitted to be fair, I waited hour after hour for the manifestations, the non-production of which was attributed to my 'atmosphere of incredulity.'

Thus, having accompanied a scientific friend to a Spiritualistic *séance*, at which we saw a small light table dance up and down under the hands of a professional 'medium' (Mrs. M.) as she moved across the room, I pointed out to my friend, who regarded this as an example of 'spiritual' agency, that since the 'medium' wore a large crinoline which completely concealed her feet, it was quite possible for her to have lifted the table upon one foot, while moving across the room on the other—as any opera-dancer could do. My friend, candidly admitting the possibility of this explanation, subsequently invited me to a *séance* at his own house, with a non-professional 'medium;' and asked me if I was satisfied with the 'crinoline-guard' of wire and paper which he had so placed round the legs of a small table, that the 'medium' could not lift the table on her foot without breaking through the 'guard.' I replied that I was perfectly satisfied; and that if I should see the table dance up and down under his 'medium's' hands, in the same manner as under Mrs. M.'s, I should admit that it was a case for further investigation. During a *séance* of two hours, however, no other manifestation took place than 'raps,' indicating the presence of 'spirits;' the interposition of the 'crinoline-guard' apparently keeping them away from the table.[1]

[1] Since the delivery of this Lecture, Mr. A. R. Wallace has pub-

In regard to professional 'mediums' who make their living by the exercise of their supposed gifts, I came to the conclusion that we have as much right to assume fraud until the contrary shall have been proved, as we have in the case of a gipsy fortune-teller, who has managed to learn a good deal about the chief people of the country neighbourhood into which she comes, before she allows herself to be consulted, and then astonishes her credulous clients by the knowledge of their affairs which she displays. I need not tell you how one after another of such pretenders has been detected in England. In Paris the frauds of a 'spiritual' Photographic establishment were brought into the law courts, and the persons concerned in them sentenced to severe punishment, a year or two ago. And in America, the 'Katie King' imposture, which had deluded some of the leading spiritualists in this country, as well as in the United States, was publicly exposed at about the same time.

But, it is affirmed, such exposures *prove* nothing against the genuineness of any new manifestation. I quite admit this. But I affirm that to anyone accustomed to weigh the value of evidence, the fact that the testimony in favour of a whole series of antecedent claims has been completely upset, seriously invalidates (as I have shown in regard to Mesmeric *clairvoyance*) the trustworthiness of the testimony in favour of any new claimant to 'occult' powers. Why should

licly avowed himself to be the 'scientific friend' to whom I referred; and has stated that on subsequent occasions the table *did* rise within the 'crinoline guard.' Has it ever done so, I ask, in the presence of a sceptical expert?

I believe the testimony of any believer in the genuineness of D's performances, when he has been obliged to admit that he has been egregiously deceived in the cases of A, B, and C?

The case is not essentially different in regard to 'mediums' who do *not* practise for gain. For it is perfectly well known to those who have had adequate opportunities of observation, that there is a class of persons (especially, I am sorry to have to say, of the female sex) who have an extraordinary proclivity to deceit, even from a very early period of life; and who enjoy nothing better than 'taking-in' older and wiser people, even when doing so brings no special advantage to themselves.[1] Every Medical practitioner of large experience has met with cases in which young ladies have imposed in this way, by feigning disease, not only upon their families, but upon their previous doctors; the supposed patients sometimes undergoing very severe treatment for its cure. And when the new attendant has sagaciously found out the cheat, and has honestly exposed it to the parents, he is in general 'morally' kicked out of the house for his unfounded aspersion;—not every one having the good

[1] Thus Mr. Braid gives (*Magic, Witchcraft, &c.*, p. 117) the case of a boy who got credit in his own town for *clairvoyant* power; being able to read, play cards, &c., when the upper part of his face was covered with a mask of nine folds of silk stuffed with cotton-wool. Hundreds of respectable people were ready to attest the fact; but when the precaution suggested by Mr. Braid—of guarding against interspaces near the nose—was put in practice, the trick was made apparent, as in the case of Madlle. Pigeaire (p. 74). Mr. Braid was requested not to make any public exposure of the cheat; "because the boy's father was "such a respectable man, being one of the Town-Council."'

fortune of my old friend Dr. A. T. Thompson, who was sent for some years afterwards by a young married lady to attend her family, on account of the high opinion she had formed of his ability, as the only one of the many doctors formerly consulted about her, who had found out the real nature of her case. I could tell you the particulars, in my possession, of the detection of the imposture practised by one of the most noteworthy of these Lady-mediums, in the distribution of flowers which she averred to be brought-in by the 'spirits' in a dark *séance*, fresh from the garden, and wet with the dew of heaven; these flowers having really been previously collected in a basin upstairs, and watered out of a decanter standing by,—as was proved by the fact, that an inquisitive sceptic having furtively introduced into the water of the decanter a small quantity of a nearly colourless salt (ferrocyanide of potassium), its presence in the 'dew' of the flowers was afterwards recognised by the appropriate chemical test (a per-salt of iron) which brought out 'prussian blue.'

In other instances, again, I have witnessed the most extraordinary *self*-deception: which, as in the Mesmeric performances, invested occurrences which could be readily accounted for on 'natural' principles, with a 'supernatural' character; often through the omission of some essential fact, which is entirely ignored by the narrator. Thus I was seriously informed, during the Table-turning epidemic, that a table had been moved round by the will of a gentleman sitting at a distance from it; but it came out upon cross-examination, that

a number of hands were laid upon it in the usual way, and that after the performers had sat for some time in silent expectation, the operator called upon 'the spirit of Samson' to move the table, which then obediently went round.—Sometimes the essential fact, under the influence of this proclivity, completely passes out of the mind of the narrator; as in the instance of a lady, cited by Miss Cobbe in her paper on the 'Fallacies of Memory,' who assured Miss C. that a table in her drawing-room had some years before correctly rapped out her age in the presence of several persons, *none of whom were near the table*; the fact being impressed on her mind by her annoyance at the disclosure, which was so great that she sold the table! Having assured Miss Cobbe that she could verify her statement by reference to notes made at the time, she subsequently corrected it, very honestly, by telling Miss C. that she found that there *were* hands on the table.—So, I have been recently requested by a gentleman to go and see a light table made heavy at the will of a person standing apart from it; a table which could be ordinarily lifted on a single finger, requiring the strength of the hands to raise it when so commanded. Thinking that this might be a trick of the kind that Houdin played upon the Arabs by means of an electro-magnet, I made some preliminary enquiries with a view to satisfy myself whether the phenomenon was to be thus accounted for; and finding that it was not, I was about to go to witness it, when I received a letter from the brother of my correspondent, who told me that he thought I ought to know the real conditions of the

performance; which were that, the hands of two of the operator's family being first laid upon the table, the table was upset and lay on the floor on its side; and that then, their hands still pressing sideways upon the top of the table, it could be made light or heavy by the will of the operator at a distance, a single finger being able to raise it up in the once case, while the whole hand was required in the other. And thus, as in the case of 'the spirit of Samson,' it became evident that the will of the operator was exercised in regulating the pressure of the hands in contact with the table, there being no evidence whatever of any alteration in its actual weight.

One potent source of this self-deception, I find in the state of *expectancy* that results from prolonged and repeated *séances*; in which, by mere continued monotony of impression, the mind tends towards a state in which the will and discrimination are suspended, and the expected phenomenon (such as the rising of a table in the air) takes place *subjectively*,—that is, in the belief of the person or persons who report it—without any *objective* reality. Of this mental condition an admirable description was given by Mr. Braid,[1] on the basis of his own investigations, before 'Spiritualism' became epidemic in this country; its existence is not, therefore, a hypothesis invented *ad hoc*. Sceptical enquirers, like myself, are continually told:—"You must not form your negative conclusions from "one or two failures; but you must persevere in your "enquiries until you get positive results." This is just

[1] *Appendix Q.*

like John Wesley's advice to a young preacher, who was lamenting his want of 'faith,' and asking his advice as to continuing in the ministry:—"Preach "faith *till* you have it, and then you will preach it *be-* "*cause* you have it." Spiritualistic disciples are bidden to sit hour after hour, and day after day, until they pass into the state of mind in which they can be brought to believe anything they have been led to expect; and thenceforth they rail at scientific sceptics for not abnegating their intellectual discrimination, by submitting themselves to a process which dethrones their higher powers from their normal supremacy, and leaves their imaginations free scope.

I have thus endeavoured to set before you what a long sequence of experiences seems to me to teach in regard to this subject; namely, that we should rather trust to the evidence of our *sense*, than to that of our *senses*. That the latter is liable to many fallacies, we are almost daily finding out. If we go to see the performances of a Conjuror, we *see* things which we *know* to be impossibilities; and that knowledge makes us aware that they *cannot really* happen as they *seem* to happen. Thus every conjuror can pour out scores of glasses of different kinds of wine from a single bottle; or can tumble a great pile of bouquets out of a single hat; but we know that he *must* do this from some larger store, which he dexterously conceals from our view. So, the celebrated conjuror Bosco seemed even to those who were closely watching him within a very short distance, to convert a living

hare into two living rabbits; the movements by which he made the exchange from a bag behind him, being so extraordinarily rapid as to elude the observation of the bystanders, whose attention he fixed (the great secret alike of conjurors and professional 'mediums') upon something else. And I conclude, therefore, as I began, with the affirmation that we have a right to reject the testimony of the most truthful and honest witnesses, as to asserted phenomena which are as much opposed to the 'Laws of Nature' as the transport of a human being through the air, the conversion of an old woman into a hare (or *vice versâ*), or the change of a hare into two rabbits; until the facts of the case shall have been so thoroughly sifted by the investigation of 'sceptical experts' as to present an irresistible claim on our belief. In every case within my knowledge, in which such investigation *has* been made, its fallacies have become apparent; and when, therefore, I receive narratives from persons quite credible in regard to *ordinary* matters, as to *extraordinary* occurrences which have taken place within their knowledge, I think myself justified in telling them plainly that their conviction cannot govern my belief, because both theory and experience have led me to the conclusion that no amount of testimony is good for anything, which is given by persons 'possessed' with a 'dominant idea' in regard to the subject of it, and which has not been tested by severe cross-examination.

As I wrote twenty-three years ago:—"In all ages the possession of men's minds by dominant ideas has

"been most complete, when these ideas have been *reli-*
"*gious* aberrations. The origin of such aberrations has
"uniformly lain in the preference given to the feelings
"over the judgment, in the inordinate indulgence of
"emotional excitement without adequate control on
"the part of the rational will. Those who are thus
"affected place themselves beyond the pale of any ap-
"peals to their reasoning faculty, and lead others into
"the same position. They are no more to be argued
"with, than are insane patients. They cannot accept
"any proposition which they fancy to be in the least
"inconsistent with their prepossessions; and the evi-
"dence of their own feelings is to them the highest
"attainable truth." [1]

Many of the victims of these delusions have become the subjects of actual Insanity; which has been attributed by believers to 'a spirit having entered in and taken possession.' What kind of spirits they are which thus take possession of credulous and excitable minds, I hope that I have now made sufficiently plain: they are *Dominant Ideas*.

[1] *Quarterly Review*, October 1853.—A sensible Clergyman has lately written in almost the same words, in regard to the 'dominant ideas' by which his ultra-ritualistic brethren are at present possessed. "I "know well (says 'Clericus,' *Times*, Dec. 29, 1876) that when men have "once committed themselves to a false principle or theory, it becomes a "monomania with them for a time; and those who on all other points "are reasonable and capable of forming just conclusions, become utterly "blind and illogical, so that argument with them is hopeless."

APPENDICES.

APPENDIX A.

MAGIC AND DEMONIACAL AGENCY AT THE CHRISTIAN ERA.

"For many years before this time, and for many years after, impostors from the East, pretending to magical powers, had great influence over the Roman mind. All the Greek and Roman literature of the empire, from Horace to Lucian, abounds in proof of the prevalent credulity of this sceptical period. Unbelief, when it has become conscious of its weakness, is often glad to give its hand to superstition. The faith of educated Romans was utterly gone. We can hardly wonder, when the East was thrown open—the land of mystery—the fountain of the earliest migrations—the cradle of the earliest religions—that the imagination both of the populace and the aristocracy of Rome became fanatically excited, and that they greedily welcomed the most absurd and degrading superstitions. Not only was the metropolis of the empire crowded with hungry Greeks, but Syrian fortune-tellers flocked into all the haunts of public amusement. Every part of the East contributed its share to the general superstition. The gods of Egypt and Phrygia found unfailing votaries. Before the close of the republic, the temples of Isis and Serapis had been more than once erected, des-

troyed and renewed. Josephus tells us that certain disgraceful priests of Isis were crucified at Rome by the second emperor; but this punishment was only a momentary check to their sway over the Roman mind. The more remote districts of Asia Minor sent their itinerant soothsayers; Syria sent her music and her medicines; Chaldæa her Babylonian numbers and mathematical calculations. To these corrupters of the people of Romulus we must add one more Asiatic nation—the nation of the Israelites;—and it is an instructive employment to observe that, while some members of the Jewish people were rising, by the Divine power, to the highest position ever occupied by men on earth, others were sinking themselves, and others along with them, to the lowest and most contemptible degradation."—Conybeare and Howson's *Life of St. Paul*, vol. i. p. 158.

The reputation of Simon Magus of Samaria stood so high in Rome, alike with the Senate and the people, that he was even adored as a god; a statue being raised to him in the island of the Tiber, with the inscription, *Simoni Deo Sancto.* Several of the early Christian Fathers who speak of this inscription, fully admit the reality of Simon's miraculous powers, as shown in his making statues which walked at his command in the midst of a crowd thunderstruck with wonder and fright; his remaining unhurt in the midst of the flames of a burning pile; his changing stones into bread; his making a scythe mow without hands, and the like:—some of them merely protesting against his being credited with the attribute of Divinity, whilst others affirm that it was only after having failed to obtain these powers from the Apostles by the offer of money, that he gained them by allying himself with Demons. Apollonius of Thyana was another celebrated magician of the first century, who figures much in the writings of the early fathers as an opponent of the Christians, to whom he did all the mischief he could by his diabolical arts; in which these Fathers believed as firmly as

they did in those of Simon Magus. There is a singular passage in Tertullian (Apologies, chap. xxiii.), which refers to magicians who could bring up phantoms, evoke the spirits of the dead, force the mouths of infants to utter oracles, and make chairs and tables prophesy by means of 'circles' or chains formed by the joined hands of several individuals—exactly after the manner of modern Spiritualists. If 'the spirits' are powerful enough, argues Tertullian, to do these things at the orders of others, what must they be able to effect when working with redoubled zeal on their own account? Against these he sets two Christian miracles which occurred within his own knowledge; the first, of a corpse, at its own funeral, raising and clasping its hands in the usual attitude of supplication at the first word of the priest in prayer, and then replacing them at its sides when the prayer was over; and the second, of a Christian corpse long dead and buried, which, on its grave being re-opened for the admission of a recently defunct, courteously moved to one side to make room for the new-comer! These statements, doubtless made in all honesty and good faith, curiously illustrate that influence of 'dominant ideas' over an intellect powerful, subtle, and profound in many respects, but totally destitute of scientific discrimination, which it is the object of these Lectures to elucidate.

APPENDIX B.

FLAGELLANT MANIA.

The private practice of individual flagellation, as an act of self-mortification, was common among religious communities from an early period of Christianity; but it was not until the thirteenth century, when a general belief prevailed that

the end of the world was at hand, that regular associations and fraternities were formed for its public performance, and that the mania spread epidemically over a large part of Europe. Of the *Devoti* of Italy in the year 1260, we are told by a contemporary historian that "noble and ignoble, old and young, and even children of five years of age, marched through the streets with no covering but a scarf round the waist. They each carried a scourge of leathern thongs, which they applied to their limbs, amid sighs and tears, with such violence that the blood flowed from the wounds. Not only during the day, but even by night, and in the severest winter, they traversed the cities with burning torches and banners in thousands and tens of thousands, headed by their priests, and prostrated themselves before the altars. They proceeded in the same manner in the villages; and the woods and mountains resounded with the voices of those whose cries were raised to God. The melancholy chaunt of the penitent alone was heard. Enemies were reconciled; men and women vied with each other in splendid works of charity, as if they dreaded that Divine Omnipotence would pronounce on them the doom of annihilation." (Monachus Paduanus, in Hecker's *Epidemics of the Middle Ages*, translated by Dr. Babington for the Sydenham Society, p. 36.)

It was in the middle of the fourteenth century (1347–1350) that Europe was devastated by the Black Death, a most malignant form of the Oriental Plague, which is believed to have carried off *one fourth* of its entire population; and under the terror inspired by this visitation the flagellant Mania, which had previously almost entirely abated, broke out with new fury, apparently in many places at once; and the excesses of this fanaticism became even more violent than before. But though it prevailed over nearly the whole of Continental Europe, this Mania does not seem to have become epidemic in Britain. We are told by Stow that a band

of Flagellants reached London in the reign of Edward III., their number consisting of 120 men and women. Each day, at an appointed hour, they assembled, ranged themselves in two lines, and paraded the streets scourging their naked shoulders and chanting a hymn. At a given signal, all with the exception of the last, threw themselves flat on the ground; and he who was last, as he passed by his companions, gave each a lash, and then also lay down. The others followed in succession, till every individual in his or her turn had received a stroke from the whole brotherhood. The citizens of London gazed and marvelled, pitied and commended; but they went no farther. Their faith was too weak, or their skins too delicate; and they allowed the strangers to monopolise all the merits of such a religious exercise. The missionaries did not make a single convert, and were obliged to return without any other success than the conviction of having done their duty to an unbelieving generation.

Though the practice was at first encouraged by the Church, the Flagellants subsequently fell under its ban as heretical; for they taught that many of its doctrines were false, and that faith and flagellation, with a belief in the Apostles' Creed, were alone necessary to salvation. The priests complained of their loss of influence; the hierarchy took the alarm; and the Pope prohibited throughout Christendom the continuance of the flagellant pilgrimages, under pain of excommunication. The flagellants were then everywhere persecuted, and some of them were burned as heretics; but it was long before the Mania was completely repressed. It broke out several times in the later part of the fourteenth century; in the fifteenth it was deemed necessary in several parts of Germany to exterminate the flagellants with fire and sword; yet as late as 1710 their processions were still seen in Italy. Of the strength of this 'possession,' it is scarcely possible to conceive a stronger instance than is presented by the depo-

sition of a citizen of Nordhäusen, in 1446, that his wife, in the belief of performing a Christian act, wanted to scourge her children as soon as they were baptised!

APPENDIX C.

DANCING MANIA.

"In the year 1374, assemblages of men and women were seen at Aix-la-Chapelle, who had come out of Germany, and who, united by one common delusion, exhibited to the public, both in the streets and in the churches, the following strange spectacle:—They formed circles hand in hand, and appearing to have lost all control over their senses, continued dancing, regardless of the bystanders, for hours together, in wild delirium, until at length they fell to the ground in a state of exhaustion. They then complained of extreme oppression, and groaned as if in the agonies of death, until they were swathed in clothes bound tightly round their waists; upon which they again recovered, and remained free from complaint until the next attack. This practice of swathing was resorted to, on account of the tympany which followed these spasmodic ravings; but the bystanders frequently relieved patients in a less artificial manner, by thumping and trampling upon the parts affected. While dancing they neither saw nor heard, being insensible to external impressions through the senses; but were haunted by visions, their fancies conjuring up spirits, whose names they shrieked out; and some of them afterwards asserted that they felt as if they had been immersed in a stream of blood, which obliged them to leap so high. Others, during the paroxysm, saw the heavens open, and the Saviour enthroned with the Virgin Mary; according as the religious notions of the age were strangely and variously reflected in their imaginations.

Where the disease was completely developed, the attack commenced with epileptic convulsions. Those affected fell to the ground senseless, panting and labouring for breath. They foamed at the mouth, and suddenly springing up began their dance amidst strange contortions.

"A few months after this dancing malady had made its appearance at Aix-la-Chapelle, it broke out at Cologne, where the number of those possessed amounted to more than five hundred; and about the same time at Metz, the streets of which place are said to have been filled with eleven hundred dancers. Peasants left their ploughs, mechanics their workshops, housewives their domestic duties, to join the wild revels; and this rich commercial city became the scene of the most ruinous disorder.

"The St. Vitus's dance attacked people of all stations, especially those who led a sedentary life, such as shoemakers and tailors; but even the most robust peasants abandoned their labours in their fields, as if they were possessed by evil spirits; and those affected were seen assembling indiscriminately, from time to time, at certain appointed places, and, unless prevented by the lookers-on, continued to dance without intermission, until their very last breath was expended. Their fury and extravagance of demeanour so completely deprived them of their senses, that many of them dashed their brains out against the walls and corners of buildings, or rushed headlong into rapid rivers, where they found a watery grave. Roaring and foaming as they were, the bystanders could only succeed in restraining them by placing benches and chairs in their way, so that, by the high leaps they were thus tempted to take, their strength might be exhausted. As soon as this was the case, they fell, as it were, lifeless to the ground, and, by very slow degrees, recovered their strength. Many there were, who, even with all this exertion, had not expended the violence of the tempest which raged within them; but awoke with newly re-

vived powers, and again and again mixed with the crowd of dancers; until at length the violent excitement of their disordered nerves was allayed by the great involuntary exertion of their limbs; and the mental disorder was calmed by the exhaustion of the body. The cure effected by these stormy attacks was in many cases so perfect, that some patients returned to the factory or the plough, as if nothing had happened. Others, on the contrary, paid the penalty of their folly by so total a loss of power, that they could not regain their former health, even by the employment of the most strengthening remedies."—(Hecker's *Epidemics of the Middle Ages*, pp. 87–104.)

APPENDIX D.

THE 'ANIMAL MAGNETISM' OF MESMER.

"Animal Magnetism is a fluid universally diffused; it is the medium of a mutual influence between the heavenly bodies, the earth, and animated bodies; it is everywhere continuous, so as to leave no void; its subtlety admits of no comparison; it is capable of receiving, propagating, communicating all the impressions of motion; it is susceptible of flux and of reflux. The animal body experiences the effects of this agent; by insinuating itself into the substance of the nerves it affects them immediately. There are observed, particularly in the human body, properties analogous to those of the magnet; and in it are discerned properties equally different and opposite. The action and the virtues of animal magnetism may be communicated from one body to other bodies, animate and inanimate. This action takes place at a remote distance, without the aid of any intermediate body; it is increased, reflected by mirrors; communicated, propagated, augmented by sound; its virtues

may be accumulated, concentrated, transported. Although this fluid is universal, all animal bodies are not equally susceptible of it; there are even some, though a very small number, which have properties so opposite, that their very presence destroys all the effects of this fluid on other bodies. Animal Magnetism is capable of healing diseases of the nerves immediately, and others mediately. It perfects the action of medicines; it excites and directs salutary *crises* in such a manner that the physician may render himself master of them; by its means he knows the state of health of each individual, and judges with certainty of the origin, the nature, and the progress of the most complicated diseases; he prevents their increase, and succeeds in healing them without at any time exposing his patient to dangerous effects or troublesome consequences; whatever be the age, the temperament, and the sex. In animal magnetism, nature presents a universal method of healing and preserving mankind."—(*Mémoire sur la Découverte du Magnétisme Animal*, par M. Mesmer. Paris, 1779, p. 74, *et seq.*—*Ibid*, *Avis du Lecteur*, p. 6.)

APPENDIX E.

REPORT ON MESMER'S PRETENSIONS, BY THE COMMISSION APPOINTED BY THE ACADEMY OF SCIENCES, PARIS.

"The sick persons, arranged in great numbers and in several rows around the *baquet*, receive the magnetism by all these means; by the iron rods which convey to them that of the baquet; by the cords wound round their bodies; by the connection of the thumbs which communicate to them that of their neighbours; by the sound of the pianoforte, or of an agreeable voice diffusing the magnetism in the air; by

the finger and rod of the magnetiser moved before their faces, above or behind their heads, and on the diseased parts, always observing the direction of the poles; by the eye of the magnetiser; but above all by the application of his hands and the pressure of his fingers on the hypochondria and on the regions of the abdomen; an application often continued for a long time, sometimes for several hours. Meanwhile the patients, in their different conditions, present a varied picture. Some are calm, tranquil, and experience no effect; others cough, spit, feel slight pains, local or general heat, and have sweatings; others again are agitated or tormented with convulsions. These convulsions are remarkable in regard to the number affected with them, and to their duration and force; and are characterised by the precipitous involuntary motions of all the limbs and of the whole body, by the constriction of the throat, by the violent heavings of the hypochondria and the epigastrium; by the dimness and wandering of the eyes; by piercing shrieks, tears, sobbing, and immoderate laughter. They are preceded or followed by a state of languor and reverie, a kind of depression, and even drowsiness. The smallest unforeseen noise occasions shudderings; even a change of tone and measure in the airs played on the pianoforte influences the patients, a quicker motion agitating them more and renewing the vivacity of their convulsions. Nothing is more astonishing than the spectacle of these convulsions; one who has not seen them can form no idea of them. The spectator is equally astonished at the profound repose of one part of the patients, and at the agitation of the rest; at the various accidents which are repeated, and the sympathies which are established. Some patients devote their exclusive attention to each other, rushing towards one another, smiling, speaking with affection, and mutually soothing their *crises*. All are under the power of the magnetiser; it matters not in what state of drowsiness they may be; his voice, a look, a

gesture brings them out of it."—*(Report of the Commission of the French Academy of Sciences.)*

The Commissioners further reported—"That this pretended agent certainly is not common Magnetism; for on examining the *baquet*, the grand reservoir of this wonderful fluid, by means of a needle and electrometer, not the slightest indication of the presence either of common magnetism or of electricity was afforded; that it is wholly inappreciable by any of the senses, or by any mechanical or chemical process; that they tried it upon themselves and upon many others, without being able to perceive anything; that on blindfolding those who seemed to be most susceptible to its influence, all its ordinary effects were produced when nothing was done to them, but when they imagined they were being magnetised, while none of its effects were produced when they were really magnetised, but imagined that nothing was being done; that, in like manner, when brought under a magnetised tree, nothing happened if the subjects of the experiment thought they were at a distance from the tree, while they were immediately thrown into convulsions if they believed they were near the tree, although really at a distance from it; that, consequently the effects actually produced were produced purely by the imagination; that these effects, though some cures might be wrought, were not without danger, since the convulsions excited were often violent and exceedingly apt to spread, especially among men feeble in body and weak in mind, and almost universally among women; and finally, that there were parts of the operation of magnetising which might readily be turned to vicious purposes, and that immoral practices had already actually grown out of them.'—*(Ibid.)*

APPENDIX F.

EXTRAORDINARY MUSCULAR ENERGY PRODUCIBLE BY MENTAL CONCENTRATION.

It is a well-known fact that when the whole energy is concentrated upon some Muscular effort, especially under the influence of an overpowering emotion, the body seems endowed with superhuman strength and agility, so as to be able to accomplish some extraordinary feat, at which the performer himself stands aghast when he contemplates it after his return to his sober senses. Thus an old cook-maid who heard an alarm of fire, seized an enormous box containing the whole of her property, and ran down stairs with it as easily as she would have carried a dish of meat; yet after the fire had been extinguished, she could not lift it a hair's breadth from the ground, and two men were required to carry it upstairs again.—It was by the artificial induction of a like state of concentrated effort, coupled with the assurance of easy success, ('it will go up like a feather,') with which he had completely possessed his 'subject's' mind, that Mr. Braid (in my presence) enabled a man so remarkable for the poverty of his *physique*, that he had not for many years ventured to lift a weight of twenty pounds, to take up a weight of 28 lbs. upon his little finger, and swing it round his head, with the greatest apparent ease. Neither Mr. Braid nor his son, both of them powerful men, could do anything like this; and I could not myself lift the same weight on my little finger to more than half my own height. Trickery in this case was obviously impossible; since, if the 'subject' had been trained to such feats, the effect of such training would have become visible in his muscular development.

APPENDIX G.

EXAMINATION OF MR. LEWIS'S EXPERIMENTS ON MESMERISM, AT THE MEDICAL SCHOOL OF THE UNIVERSITY AND KING'S COLLEGE, ABERDEEN.

The Committee consisted of three professors, two medical men, and a clergyman, who undertook the investigation at the earnest solicitation of the pupils in the Medical School. The experiments were conducted in a perfectly fair spirit, with every desire to do ample justice to the operator, and at the same time in such a manner as to guard against all obvious sources of fallacy. The 'subjects' were chosen by Mr. Lewis from among the students; their susceptibility having been previously tested by him. Three of the Committee remained in the Class-room where the 'subject' was seated, and recorded the time and description of the movements he performed; whilst the other three went into an adjoining room with Mr. Lewis, to direct at successive intervals the various movements they wished him to excite by his silent will and bodily gestures, recording each direction with the time at which it was given. When the round of the experiments was finished, these three gentlemen returned into the Class-room, and both reports were then read aloud and compared.

The following is the first act in the performance :—

Exactly at three P.M. Mr. Lewis was desired by his committee to 'make Mr. M.—— lie on the floor with his face on the floor.' No other direction was given for *five minutes;* during which Mr. M. made *fourteen* movements, not one of which had been willed by Mr. Lewis, or bore the least resemblance to that which he did will.

H. M. *Mr. M's. Movements.*

3.1½ P.M.—Raised himself up in the chair and shook himself.

3.2 P.M.—Slipped down a little. Got up and sat down. Changed his seat.

3.2½ P.M.—Rubbed his hand on his thigh, and his left arm with his right hand.

3.3¼ P.M.—Stamped on the floor and moved his feet sideways; then got up and changed his seat again.

3.3⅔ P.M.—Folded arms. Put left hand behind.

3.4½ P.M.—Rocked his body from side to side.

The divergence was equally great in all the other experiments; so that the Committee unanimously agreed in the Report (to which Mr. Lewis could make no objection) that "these experiments afford no ground whatever for the "opinion that either Mr. L—— or any other person can in-"fluence another at a distance from him." Mr. Lewis being further challenged to prove his control over the influence of gravitation, by making Mr. M. stand on one leg, with the same side of his body and his foot pressed close to the wall, he utterly failed to do so.

In accordance with an arrangement previously made, Mr. Lewis left the Class-room when this series of experiments had been brought to an end; and the spectators were requested to remain quiet for a while, as another experiment was about to be tried—this being as to Mr. Lewis's asserted power of mesmerising from a distance. This power he was to exercise from his lodgings upon Mr. M., the subject of his previous experiments, at 4 hours 5 min. P.M. Instead, however, of passing into the mesmeric sleep, Mr. M. got up from his seat at 4 hours 5 min., came suddenly forward to a chair, sat upon it in a state of apparent excitement for half a minute, then rushed back, snatched his hat from the ground, and ran off to Mr. L.'s lodgings, where, however,

he did *not* find Mr. L. Another gentleman, Mr. H., who had been previously acted on, seemed to suppose that he was again affected by Mr. L.'s manœuvres; for, after Mr. M. first got up, he bent down his head, and appeared to be in a state of great nervous excitement; refusing to leave on being pressed to do so. He remained in this state for half an hour, and was at last induced to go away, in company of two students who took charge of him. Before he could be prevailed upon to go home, he also went to Mr. L.'s lodgings, feeling himself irresistibly drawn thither by Mr. L.'s silent will; but it was ascertained that all this occurred without Mr. Lewis having directed his mind to him at all! The supposed 'attraction' thus obviously existed only in the imaginations of the 'subjects,' who had heard of Mr. Lewis's asserted power, and supposed that it was being exerted upon them.—*Edinburgh Monthly Journal of Medical Science*, February, 1852.

APPENDIX H.

SUPPOSED INFLUENCE OF MAGNETS ON MESMERISED SUBJECTS SHOWN TO BE DUE TO MENTAL SUGGESTION.

"When in London lately," says Mr. Braid, "I had the pleasure of calling upon an eminent and excellent physician who is in the habit of using mesmerism in his practice, in suitable cases, just as he uses any other remedy. He spoke of the extraordinary effects which he had experienced from the use of magnets applied *during the mesmeric state*, and kindly offered to illustrate the fact on a patient who had been asleep all the time I was in the room, and in that stage, during which I felt assured she could overhear every word of our conversation. He told me, that when he put the magnet into her

hands, it would produce catalepsy of the hands and arms, and such was the result. He wafted the hands, and the catelepsy ceased. He said that a mere touch of a magnet on a limb would stiffen it, and such he proved to be the fact.

"I now told him, that I had got a little instrument in my pocket, which, although far less than his, I felt assured would prove quite as powerful; and I offered to prove this by operating on the same patient, whom I had never seen before, and who was in the mesmeric state when I entered the room. My instrument was about three inches long, the thickness of a quill, with a ring attached to the end of it. I told him that when put into her hands, he would find it catalepsize both hands and arms as his had done; and such was the result. Having reduced this by wafting, I took my instrument from her, and again returned it, *in another position*, and told him it would *now* have the very reverse effect —that she would not be able to hold it, and that although I closed her hands on it, they would open, and that it would drop out of them; and such was the case, to the great surprise of my worthy friend, who now desired to be informed *what I had done to the instrument to invest it with this new and opposite power*. This I declined doing for the present; but I promised to do so, when he had seen some further proofs of its remarkable powers. I now told him that a touch with it on either extremity would cause the extremity to rise and become cataleptic, and such was the result; that a second touch on the same point would reduce the rigidity, and cause it to fall, and such again was proved to be the fact. After a variety of other experiments, every one of which proved precisely as I had predicted, she was aroused. I now applied the ring of my instrument on the third finger of the right hand, from which it was suspended, and told the doctor, that when it was so suspended, it would send her to sleep. To this he replied "*it never will*," but I again

told him that I felt confident that it would send her to sleep. We then were silent, and very speedily she was once more asleep. Having aroused her, I put the instrument on the second finger of her right hand, and told the doctor that it would be found she could NOT go to sleep, when it was placed there. He said he thought she would, and he sat steadily gazing at her, but I said firmly and confidently that she would not. After a considerable time the doctor asked her if she did not feel sleepy, to which she replied 'not at all'; could you rise and walk? when she told him she could. I then requested her to look at the point of the fore-finger of her right hand, which I told the doctor would send her to sleep, and such was the result; and, after being aroused, I desired her to keep a steady gaze at the nail of the thumb of the left hand, which would send her to sleep in like manner, and such proved to be the fact.

"Having repaired to another room, I explained to the doctor the real nature and powers of my little and apparently magical instrument,—that it was nothing more than my *portmanteau-key and ring*; and that what had imparted to it such apparently varied powers, was merely the predictions which the patient had overheard me make to him, acting upon her in the peculiar state of the nervous sleep, as irresistible impulses to be affected, according to the results she had heard me predict. Had I predicted that she would see any flame, or colour, or form, or substance, animate or inanimate, I know from experience that such would have been realised, and responded to by her; and that, not from any desire on her part to impose upon others, but because she was self-deceived, the vividness of her imagination in that state, inducing her to believe as real, what were only the figments of fancy, suggested to her mind by the remarks of others. The power of suggestions of this sort also, in paralysing or energising muscular power, is truly astounding; and may all arise in perfect good faith with almost all patients who have passed into the second conscious state,

and with some, during the first conscious stage; and with some weak-minded, or highly imaginative or credulous and concentrative people, *even in the waking condition.*" (Braid on *The Power of the Mind over the Body*, 1846; p. 31.)

APPENDIX I.

MR. BRAID'S EXPERIMENTS ON SUBJECTIVE SENSATIONS.

"A lady, upwards of fifty-six years of age, in perfect health, and wide awake, having been taken into a dark closet, and desired to look at the poles of the powerful horse-shoe magnet of nine elements, and describe what she saw, declared, after looking a considerable time, that she saw nothing. However, after I told her to look attentively, and she would see fire come out of it, she speedily saw sparks, and presently it seemed to her to burst forth, as she had witnessed an artificial representation of the volcano of Mount Vesuvius at some public gardens. Without her knowledge, I closed down the lid of the trunk which contained the magnet, *but still the same appearances were described as visible.* By putting leading questions, and asking her to describe what she saw from *another* part of the closet (where there was nothing but bare walls) she went on describing various shades of most brilliant coruscations and flame, according to the leading questions I had put for the purpose of changing the fundamental ideas. On repeating the experiments, similar results were repeatedly realised by this patient. On taking this lady into the said closet after the magnet had been removed to another part of the house, she still perceived the same visible appearances of light and flame when there was nothing but the bare walls to produce them; and, two weeks after the magnet was removed, when she went into the closet by herself, the mere association of ideas was sufficient to cause her to realise a visible representation

of the same light and flames. Indeed such had been the case with her on entering the closet ever since the few first times she saw the light and flames. In like manner when she was made to touch the poles of the magnet when wide awake, no manifestations of attraction took place between her hand and the magnet, but the moment the idea was suggested that she would be held fast by its powerful attraction, so that she would be utterly unable to separate her hands from it, such result was realised; and, on separating it, by the suggestion of a new idea, and causing her to touch the *other* pole in like manner, predicating that *it* would *exert no attractive power* for the fingers or hands, such negative effects were at once manifested. I know this lady was incapable of trying to deceive myself, or others present; but she was self-deceived and spell-bound by the predominance of a pre-conceived idea, and was not less surprised at the varying powers of the instrument than others who witnessed the results." (*Op. cit.*, p. 19.)

Other 'subjects' taken by Mr. Braid into his dark closet, and unable to see anything in the first instance, when told to look steadily at a certain point (though there was no magnet there) and assured that they would see flame and light of various colours issuing from it, very soon declared that they saw them; and in some of them the same sensations could be called up in open daylight.—The following was an experiment made, *with* and *without* the magnet, upon the sensations of the general surface; the 'subject' being a young gentleman twenty-one years of age:—

"I first operated on his right hand, by drawing a powerful horse-shoe magnet over the hand, without contact, whilst the armature was attached. He immediately observed a sensation of cold follow the course of the magnet. I reversed the passes, and he felt it *less cold*, but he felt no attraction between his hand and the magnet. I then removed the cross-bar, and tried the effect with both poles

alternately, but still there was no change in the effect, and decidedly no proof of attraction between his hand and the magnet. In the afternoon of the same day I desired him to look aside, and hold his hat between his eyes and his hand, and observe the effects when I operated on him, whilst he could not see my proceedings. He very soon described a recurrence of the same sort of sensations as those he felt in the morning, but they speedily became more intense, and extended up the arm, producing rigidity of the member. In the course of two minutes this feeling attacked the other arm, and to some extent the whole body; and he was, moreover, seized with a fit of involuntary laughter, like that of hysteria, which continued for several minutes—in fact, until I put an end to the experiment. His first remark was, 'Now this experiment clearly proves that there must be some intimate connection between mineral magnetism and mesmerism; for I was most strangely affected, and could not possibly resist laughing during the extraordinary sensations with which my whole body was seized, as you drew the magnet over my hand and arm.' I replied that I drew a very different conclusion from the experiments, as *I had never used the magnet at all*, nor held it, nor anything else, near to him; and that the whole proved the truth of my position as to the extraordinary power of the mind over the body." (*Op. cit.*, p. 14.)

Phenomena of the same kind were found to be producible without the use of a magnet at all:—

"Another interesting case of a married lady, I experimented with, in the presence of her husband, as follows. I requested her to place her hand on the table, with the palm upwards, so situated as to enable her to observe the process I was about to resort to. I had previously remarked, that by my drawing something slowly over the hand, without contact, whilst the patient concentrated her attention on the process, she would experience some peculiar sensations in conse-

quence. I took a pair of her scissors, and drew the bowl of the handle slowly from the wrist downwards. I had only done so a few times, when she felt a creeping, chilly sensation, which was immediately followed by a spasmodic twitching of the muscles, so as to toss the hand from the table, as the members of a prepared frog are agitated when galvanised. I next desired her to place her *other* hand on the table, in like manner, but placed so that by turning her head in the opposite direction she might not see what was being done, and to watch her sensations in that hand, and tell us the result. In about the same length of time similar phenomena were manifested as with the other hand, although in this instance *I had done nothing whatever*, and was not near her hand. I now desired her to watch what happened to her hand, when I predicated that she would feel it become *cold*, and the result was as predicted; and *vice versâ*, predicating that she would feel it become intensely hot, such was realised. When I desired her to think of the tip of her nose, the predicated result, either of heat or cold, was speedily realised in that part.

"Another lady, twenty-eight years of age, being operated on in the same manner, whilst looking at my proceedings, in the course of half-a-minute, described the sensation as that of the blood rushing into the fingers; and when the motion of my pencil-case was from below, upwards, the sensation was that of the current of blood being reversed, but less rapid in its motion. On resuming the downward direction, the original feeling occurred, still more powerfully than at first. This lady being requested now to look aside, whilst I operated, *realised similar sensations*, and that whilst *I was doing nothing*.

"The husband of this lady, twenty-eight and a half years of age, came into the room shortly after the above experiment was finished. She was very desirous of my trying the effect upon him, as he was in perfect health. I requested

him to extend his right arm laterally, and let it rest on a chair with the palm upwards, to turn his head in the opposite direction so that he might not see what I was doing, and to concentrate his attention on the feelings which might arise during my process. In about half-a-minute he felt an *aura* like a breath of air passing along the hand; in a little after a slight pricking, and presently a feeling passed along the arm, as far as the elbow, which he described as similar to that of being slightly electrified. *All this while I had been doing nothing*, beyond watching what might be realised. I then desired him to tell me what he felt NOW—speaking in such a tone of voice as was calculated to lead him to believe I was operating in some different manner. The result was that the former sensations ceased; but, when I requested him once more to tell me what he felt *now*, the former sensations recurred. I then whispered to his wife, but in a tone sufficiently loud to be heard by him, observe now, and you will find his fingers begin to draw, and his hand will become clenched—see how the little finger begins to move, and such was the case; see the next one also going in like manner, and such effects followed; and finally, the entire hand closed firmly, with a very unpleasant drawing motion of the whole flexor-muscles of the fore-arm. I did nothing whatever to this patient until the fingers were nearly closed, when I touched the palm of his hand with the point of my finger, which caused it to close more rapidly and firmly. After it had remained so for a short time, I blew upon the hand, which dissipated the previously existing mental impression, and instantly the hand became relaxed. The high respectability and intelligence of this gentleman rendered his testimony very valuable; and especially so, when he was not only wide awake, but had never been either mesmerised, hypnotised, or so tested before." (*Op. cit.*, pp. 15–17.)

APPENDIX K.

PENDULE EXPLORATEUR.

We are told by Ammianus Marcellinus (the last of the Roman Historians) that, in the reign of the Emperor Flavius Valens (4th century) a conspiracy was formed, including many persons of high rank, who devoted themselves to 'curious arts,' among them the celebrated Iamblicus, a mystic philosopher of the Alexandrian School; their objects being to learn who would be the successor of the reigning Emperor, which piece of curiosity was held to be a capital crime. Of the magical procedure they employed, of which a full description was given by one of them named Hilarius when put on his trial, the oscillations of a suspended ring, that pointed to one letter after another of an alphabet circularly disposed, constituted the essential part. The three letters ΘΕΟ having been thus spelled-out, the conspirators made up their minds that Theodosius was indicated; and although the principal members of the conspiracy were afterwards put to death by the Emperor, the destiny of Theodosius was accomplished, for he ultimately became the successor of Valens.

APPENDIX L.

TABLE-TALKING AND PLANCHETTE-WRITING.

"Several years ago we were invited, with two medical friends, to a very select *séance*, to witness the performance of a lady, the Hon. Miss N——, who was described to us as a peculiarly gifted 'medium;' not merely being the vehicle of 'spiritual' revelations of the most elevating character, but being able to convince incredulous philosophers

like ourselves of the reality of her 'spiritual' gifts, by 'physical' manifestations of the most unmistakable kind. Unfortunately, however, the Hon. Miss N—— was not in great force on the occasion of our visit; and nothing would go right. It was suggested that she might be exhausted by a most successful performance which had taken place on the previous evening; and that 'the spirits' should be asked whether she stood in need of refreshment. The question was put by our host (a wine-merchant, be it observed), who repeated the alphabet *rapidly* until he came to N, and then went on *slowly*; the table tilted at P. The same process was repeated, until the letters successively indicated were P, O, R, T. But this was not enough. The spirits might prescribe either *port* or *porter*; and the alphabet was then repeated *slowly from the beginning*, a prolonged pause being made at E; as the table did *not* tilt, a bumper of port was administered 'as directed.' It did not, however, produce the expected effect.

"On another occasion, we happened to be on a visit at a house at which two ladies were staying, who worked the *planchette* on the original method (that of attaching to it a pointer, which indicated letters and figures on a card), and our long previous knowledge of whom placed them beyond all suspicion of anything but *self*-deception. One of them was a firm believer in the reality of her intercourse with the spirit-world; and her 'planchette' was continually at work beneath her hands, its index pointing to successive letters and figures on the card before it, just as if it had been that of a telegraph-dial acted on by galvanic communication. After having watched the operation for some time, and assured ourselves that the answers she obtained to the questions she put to her 'spiritual' visitants were just what her own simple and devout nature would suggest, we addressed her thus:—'*You* believe that your replies are dic-'tated to you by your "spiritual" friends, and that your hands

'are the passive vehicles of the "spiritual" agency by which 'the planchette is directed in spelling them out. *We* believe, 'on the other hand, that the answers are the products of your 'own Brain, and that the planchette is moved by your own 'Muscles. Now we can test, by a very simple experiment, 'whether *your* view or *ours* is the correct one. Will you be 'kind enough to *shut your eyes* when you ask your question, 'and to let *us* watch what the planchette spells out? If "the 'spirits" guide it, there is no reason why they should not do 'so as well when your eyes are shut, as when they are open. 'If the table is moved by your own hands, it will not give 'definite replies except under the guidance of your own 'vision.' To this appeal our friend replied that she could not think of making such an experiment, as 'it would show a want of faith;' and all our arguments and persuasions could only bring her to the point of *asking the spirits* whether she *might* comply with our request. The reply was, 'No.' She then, at our continued urgency, asked 'Why not?' The reply was, 'Want of faith.' Putting a still stronger pressure upon her, we induced her to ask, 'Faith in what?' The reply was, 'In God.'

"Of course, any further appeal in that quarter would have been useless; and we consequently addressed ourselves to our other fair friend, whose high culture and great general intelligence had prepared her for our own rationalistic explanation of marvels which had seriously perplexed her. For having been engaged a short time before in promoting a public movement, which had brought her into contact with a number of persons who had previously been strangers to her, she had asked questions respecting them, which elicited replies that were in many instances such as she declared to be quite unexpected by herself,—specially tending to inculpate some of her coadjutors as influenced by unworthy motives. After a little questioning, however, she admitted to us that she had previously entertained *lurking*

suspicions on this point, which she had scarcely even *acknowledged to herself*, far less made known to others; and was much relieved when we pointed out that the planchette merely revealed what was going on in *the under-stratum of her own mind*. Her conversion to our view was complete, when, on her trying the working of the planchette with her eyes shut, its pointer *went astray altogether*." (*Quarterly Review*, Oct. 1871, p. 315.)

It is often cited as a proof that the performers are *not* expressing by involuntary muscular actions what is passing in their own minds, that the answers given by the tables are *not known to any of themselves, though known to some other person in the room*. Of this the following instance was recorded by Mr. Godfrey:—

"I procured an alphabet on a board, such as is used in a National School; this board I laid down on the floor at some little distance from the table, and I lay down on the ground beside it. I then requested one of the three persons at the table to command it to spell the Christian names of Mr. L——, of B——, by lifting up the leg next him as I pointed to the letters of the alphabet in succession. He did so, and I began to point, keeping the pointer about three seconds on each letter in succession (I must say, that neither of the three persons at the table had ever heard of Mr. L——; and B—— is 150 miles from this place). When I arrived at G, they said, that's it; the table is lifting its leg. When I came to E, it rose again; and in this way it spelt George Peter, which was perfectly correct." (*Table-turning, the Devil's Modern Master-piece*, p. 22.) Of course the person who influenced the movements of the table was guided by the indications afforded by Mr. Godfrey's own unconscious expression of his expectancy.

So, again, the late Dr. Hare, an American Chemist and Physicist of some reputation, thought that he had obtained *a precise experimental proof of the immortality of the soul* (!) by means of an apparatus by which the answers communi-

cated through the 'medium' were spelled out by a hand pointing to an alphabet-dial which was hidden from her eyes. But it is clear from his narrative of the experiment, that her eyes were fixed upon the person to whom the expected answer was known, and that her movements were guided by the indications she received from *his* involuntary movements.

REPRODUCTION OF UNREMEMBERED IDEAS.

A 'planchette,' made in Bath, which had been on a visit in various families for several months, having been asked where it was made, replied 'Bath;' although the questioners all thought it came from *London*, and disbelieved its statement, which was afterwards verified. The rational explanation of this obviously is, that the writing was guided by the *cerebral* memory (so to speak), instead of by the *conscious* memory; just as in the case of the movements in acted dreams, by which articles long lost have been found again.

The Rev. Mr. Dibdin, M.A. (in his *Lecture on Table-Turning*, published in 1853), states that he and a friend having directed the table to say, 'How many years is it since her Majesty came to the throne?' the table struck *sixteen*, though no one present knew the date of her accession; and having directed it to 'give the age of the Prince of Wales,' which was not known either to Mr. Dibdin or his friend, the table struck *eleven*, and then raised the foot a little way. On referring to an Almanack, both these numbers were found to be correct. Further, the question being put (in the house of a tailor), 'How many men are at work in the shop below?' the table replied by striking *three*, and giving *two* gentle rises; on which the employer, who was one of the party, said, 'There are *four* men and *two* boys, so *three* is a mistake;' but *he afterwards remembered* that one of the young men was out of town.

"An eminent literary man, in whose veracity we have had

the fullest confidence, informed us that 'the spirit of a friend, whose decease had taken place some months previously, having announced itself in the usual way, and the question having been put, 'When did I last see you in life?' the answer given was inconsistent with the recollection of the interrogator. But, on his subsequently talking over the matter with his family, it was brought to his remembrance that he *had* seen his deceased friend on the occasion mentioned, and had spoken of it to them at the time, although he had afterwards quite forgotten the circumstance."—(*Quarterly Review*, October 1871, p. 319.)

Another instance, supplied by Mr. Dibdin (*op. cit.*), affords yet more remarkable evidence to the same effect; especially as being related by a firm believer in the 'diabolical' origin of Table-talking:—A gentleman, who was at the time a believer in the 'spiritual' agency of his table, assured Mr. Dibdin that he had raised a *good* spirit instead of *evil* ones—that, namely, of Edward Young, the poet. The 'spirit' having been desired to prove this identity by citing a line of his poetry, the table spelled out, 'Man was not made to question, but adore.' 'Is that in your "Night Thoughts"?' was then asked. 'No.' 'Where is it, then?' The reply was, 'J O B.' Not being familiar with Young's Poems, the questioner did not know what this meant; but the next day he bought a copy of them; and at the end of 'Night Thoughts' he found a paraphrase of the Book of Job, the last line of which is, 'Man was not made to question, but adore.' Of course he was very much astonished; but not long afterwards he came to Mr. Dibdin, and assured him that he had satisfied himself that the whole thing was a delusion,—numerous answers he had obtained being obviously the results of an influence unconsciously exerted on the table by those who had their hands upon it; and when asked by Mr. Dibdin how he accounted for the dictation of the line by the spirit of Young, he very honestly confessed,

'Well, the fact is, I must tell you, that I had the book in my house all the time, although I bought another copy; and *I found that I had read it before.* My opinion is that it was *a latent idea*, and that the table brought it out.' (p. 7.)

APPENDIX M.

DIABOLICAL ORIGIN OF TABLE-TURNING.

In his *Table-moving Tested*, the Rev. N. S. Godfrey began by "tracing the existence of Satanic influence from the time of Moses to the time of Jesus; connecting the 'witch,' the 'familiar spirit,' the spirit of Python, &c. with the Evil Spirit in its actual and separate existence:" and asserting without the least hesitation, that although 'so long as the supernatural gifts of the Spirit remained among men, so long the evil spirits were cast out and their presence detected,' yet that when those miraculous powers were withdrawn, they could no longer be discerned, but have continued to exist to the present time, and make themselves known in these 'latter times' as the 'wandering (seducing) spirits,' whose appearance was predicted by St. Paul (1 Tim. iv. 10). That the answers to the 'test questions' were exactly contrary to Mr. Godfrey's ideas of truth, was in his judgment peculiarly convincing; "for if indeed these tables do become possessed "by some of the 'wandering spirits' at the command of the "Devil, it would be most impolitic, and quite at variance with "the subtlety of his character, to scare people at the very "outset." The following answers, therefore, are obviously what Mr. G. expected:—

"I spoke to the table, and said, 'If you move by electricity, stop.' It stopped instantly! I commanded it to go on again, and said, while it was moving, 'If an evil spirit

cause you to move, stop.' It moved round without stopping! I again said, 'If there be any evil agency in this, stop.' It went on as before. I was now prepared with an experiment of a far more solemn character. I whispered to the schoolmaster to bring a small Bible, and to lay it on the table when I should tell him. I then caused the table to revolve rapidly, and gave the signal. *The Bible was gently laid on the table, and it instantly stopped.* We were horror-struck. However, I determined to persevere. I had other books in succession laid on the table, to see whether the fact of a book lying upon it altered any of the conditions under which it revolved. It went round with them without making any difference. I then tried with the Bible four different times, and each time with the same result: *it would not move so long as that precious volume lay upon it.* . . . I now said, 'If there be a hell, I command you to knock on the floor with this leg (the one next me) twice.' It was motionless. 'If there be *not* a hell, knock twice;' no answer. 'If there be a devil, knock twice;' no motion. 'If there be *not* a devil, knock twice;' *to our horror, the leg slowly rose and knocked twice!* I then said, 'In the name of the Lord Jesus Christ, if there be *no* devil, knock twice;' it was motionless. This I tried four several times, and each time with the same result." (p. 24.)

It is clear that Mr. Godfrey and his associates, if they had not distinctly *anticipated* these results, were fully *prepared* for them. Thus, although he assures his readers that, when the Bible was placed on the table, the emotion in the minds of all the parties was *curiosity*, and that, if they *had* a bias, it was *against* the table stopping, the very fact of the experiment being tried by a man imbued with his prepossessions on the subject of Evil Spirits, Witchcraft, &c., sufficiently indicates what his *real* state of mind was, although he may not have been himself aware of it. His *involuntary* muscular actions responded to this, although no *voluntary* movement would have done so, because he had not *consciously*

accepted the Idea whose 'physical basis' had been shaping itself in the under-stratum. The experience of everyone must have convinced him that there is often a contrariety between our *beliefs as to our own states of mind*, and the *facts* of that state as they afterwards come to be *self-revealed* to us; and it is a very marked peculiarity of these movements, that they often express more truly what is buried (as it were) in the vaults of our storehouse, than what is displayed in the ware-rooms above.

The Rev. E. Gillson, M.A., a Clergyman of Bath, fully partaking of his predecessor's convictions on the subject of Satanic Agency, and also in the excitement prevailing in many circles at that time on the subject of 'Papal Aggression,' gave the following *inter alia* as his experiences (*Table-Talking: Satanic Wonders and Prophetic Signs*, 1853):—

"I placed my hand upon the table, and put a variety of questions, all of which were instantly and correctly answered. Various ages were asked, and all correctly told. In reply to trifling questions, possessing no particular interest, the table answered by quietly lifting up the leg and rapping. But in answer to questions of a more exciting character, it would become violently agitated, and sometimes to such a degree that I can only describe the motion by the word *frantic*. I inquired, 'Are you a departed spirit?' The answer was 'Yes,' indicated by a rap. 'Are you unhappy?' The table answered by a sort of writhing motion (!), which no natural power over it could imitate. It was then asked, 'Shall you be for ever unhappy?' The same kind of writhing motion was returned. 'Do you know Satan?' 'Yes.' 'Is he the Prince of Devils?' 'Yes.' 'Will he be bound?' 'Yes.' 'Will he be cast into the abyss?' 'Yes.' 'Will you be cast in with him?' 'Yes.' 'How long will it be before he is cast out?' He rapped *ten*. 'Will wars and commotions intervene?' The table rocked and reeled backwards and forwards for a length of time, as if it intended a pantomimic

acting of the prophet's predictions (Isaiah xxiv. 20). I then asked 'Where are Satan's head-quarters? Are they in England?' There was a slight movement. 'Are they in France?' A violent movement. 'Are they in Spain?' Similar agitation. 'Are they at Rome?' *The table literally seemed frantic.* At the close of these experiments, which occupied about two hours, the invisible agent, in answer to some questions about himself, did not agree with what had been said before. I therefore asked, 'Are you the same spirit that was in the table when we began?' 'No.' 'How many spirits have been in the table this evening?' 'Four.' This spirit informed us that he had been an infidel, and had embraced Popery about five years before his death. Amongst other questions, he was asked, 'Do you know the Pope?' The table was violently agitated. I asked, 'How long will Popery continue?' He rapped ten; exactly coinciding with the other spirits' account of the binding of Satan. Many questions were asked, and experiments tried, in order to ascertain whether the results would agree with Mr. Godfrey's; and on every occasion they did, *especially that of stopping the movement of the table with the Bible.* As we proceeded with our questions, we found an indescribable facility in the conversation, from the *extraordinary intelligence and ingenuity displayed in the table* (!) *E. g.*—I inquired if many devils were posted in Bath. He replied by the most extraordinary and rapid knocking of the three feet in succession, round and round, for some time, as if to intimate that they were innumerable!" (*Op. cit.*, pp. 4–8.)

A third Clergyman, the Rev. R. W. Dibdin, M.A., while agreeing with his predecessors in the belief that the movements of the tables are the result of Satanic (or diabolic) agency, differed from them in maintaining 'that devils alone (not departed spirits) are the agents in these cases; and being *lying* spirits, it is quite credible that, for purposes of their own, they might *assume* the names of departed men

and women.' Of course he got the answers he expected on this hypothesis. The following is his set of 'test questions,' the answers to which — being entirely *opposed* to his own notions of truth—satisfied *him*, and were expected to satisfy his partners in the experiment, of the *diabolical* character of the respondent :—

"'Are we justified by works?' 'Yes.'—'By faith alone?' 'No.'—'Is the whole Bible true?' 'No.'—'Were the miracles of the New Testament wrought by supernatural power?' 'No.'—'By some hidden law of Nature?' 'Yes.'—'Was Oliver Cromwell good?' 'No.'—'Was Charles I. a good man?' 'Yes.'—'Is it right to pray to the Virgin?' 'Yes.'—'Is Christ God?' 'No.'—'Is he a man?' 'No.'—'Is he something between God and man, a sort of angel?' 'Yes.'—'Is he in heaven?' 'No.'—'Where is he?' It spelt slowly H E L L.—As the last letter was indicated, the girl drew her hands quickly off the table, much as a person would do who was drawing them off a hot iron. Her brother-in-law turned very pale, and took his hands off the table also." (*Lecture on Table-turning*, 1853; p. 8.)

The character, position, and obvious sincerity of the actors in these performances place them beyond suspicion of intentional deception; and the phenomena they narrate afford a singularly apposite illustration of the principle which I desire to enforce. But that such obvious products of the questioners' own mental states should have been accepted by men of education, occupying the position of religious teachers in the National Church, as the lying responses of *evil* spirits, sent expressly to delude them, can only be deemed—by such, at least, as are prepared to accept a scientific *rationale* of the phenomena—a pitiable instance of the readiness with which minds of a certain type may allow themselves to become 'possessed' by dominant ideas.

APPENDIX N.

MRS. CULVER'S STATEMENT.

"I am by marriage a connection of the Fox girls. Their brother married my husband's sister. The girls have been a great deal at my house; and for about two years I was a very sincere believer in the rappings; but something which I saw when I was visiting the girls at Rochester made me suspect that they were deceiving. I resolved to satisfy myself in some way, and sometime afterwards I made a proposition to Catherine to assist her in producing the manifestations. I had a cousin visiting me from Michigan, who was going to consult the spirits; and I told Catherine that if they intended going to Detroit, it would be a great thing for them to convince him. I also told her that if I could do anything to help her, I would do it cheerfully; that I should probably be able to answer all the questions he would ask, and I would do it if she would show me how to make the raps. She said that as Margaretta was absent, she wanted somebody to help her; and that if I would become a medium, she would explain it all to me. She said that when my cousin consulted the spirits, I must sit next to her, and touch her arm when the right letter was called. I did so, and was able to answer all the questions correctly. After I had helped her in this way a few times, she revealed to me the secret. The raps are produced by the toes. All the toes are used. After nearly a week's practice with Catherine showing me how, I could produce them perfectly myself.

"At first it was very hard work to do it. Catherine told me to warm my feet, or put them in warm water, and it would then be easier to rap. She said that she had sometimes to warm her feet three or four times during the evening. I found that heating my feet did enable me to rap a great

deal easier. I have sometimes produced 150 raps in succession. I can rap with all the toes on both feet; it is most difficult to rap with the great toe. Catherine told me how to manage to answer the questions. She said it was generally easy enough to answer right, if the one who asked the question called the alphabet. She said the reason why she asked people to write down several names on paper, and then point to them till the spirits rapped at the right one, was to give them a chance to watch the countenance and motions of the person, and that in that way they could nearly always guess right. She also explained how they held down and moved tables. (Mrs. Culver here gave some illustration of the tricks.) She told me that all I should have to do to make raps heard on the table, would be to put my foot on the bottom of the table when I rapped; and that when I wished to make the raps sound distant on the wall I must make them louder, and direct my own eyes earnestly to the spot where I wished them to be heard. She said if I could put my foot to the bottom of the door, the raps would be heard on the top of the door.

"Catherine told me that when her feet were held down by the Rochester Committee, the Dutch servant-girl rapped with her knuckles under the floor from the cellar. The girl was instructed to rap whenever she heard their voices calling the spirits. Catherine also showed me how they made the sounds of sawing and planing boards. When I was at Rochester last January, Margaretta told me that when people insisted on seeing her feet and toes, she could produce a few raps with her knees and ankles.

"Elizabeth Fish (Mr. Fish's daughter), who now lives with her father, was the first one who produced these raps. She accidentally discovered the way of making them by playing with her toes against the foot-board while in bed. Catherine told me that the reason why Elizabeth went west to live with her father, was because she was too conscientious

to become a medium. The whole secret was revealed to me, with the understanding that I should practise as a medium when the girls were away. Catherine said that whenever I practised, I had better have my little girl with me, and make folks believe that she was the medium; 'for,' she said, 'they would never suspect so young a child of any tricks.' After I had obtained the entire secret, I plainly told Catherine that my only object was to find out how these tricks were done, and that I should never go any further in this imposition. She was very much frightened, and said she believed I meant to tell of it and expose them, and if I did, she would swear it was a lie. She was so nervous and excited that I had to sleep with her that night. When she was instructing me how to be a medium, she told me how frightened they used to get in New York, for fear somebody would detect them; and gave me the history of all the tricks they played upon the people there. She said that once Margaretta spoke aloud, and that the whole party believed it was a spirit."

(Signed) MRS. NORMAN CULVER.

Certificate.

"We hereby certify that Mrs. Culver is one of the most respectable and intelligent ladies in the town of Arcadia. We were present when she made the disclosures. We had heard the same from her before, and we cheerfully bear testimony that there cannot be the slightest doubt of the truth of the whole statement."

(Signed) C. J. POMEROY, M.D.
REV. D. S. CHASE.

A CORRECTION RESPECTING APPENDIX N, FROM THE ATHENÆUM OF JUNE 16, 1877.

THE ROCHESTER RAPPINGS.

June 12, 1877.

Having learned from Mr. J. Nevil Maskelyne, from whose "Modern Spiritualism" I obtained the "declaration" of Mrs. Norman Culver (originally published in the *New York Tribune*), that the date 1871, which he assigned to it, was a misprint for 1851, I willingly apologize to Mrs. Kate Fox Jencken for the chronological error into which I have been thus led, and for having given additional currency to a document of which, according to her statement, the untrustworthiness has been publicly proved; and I have directed its withdrawal from all the unsold copies of my "Lectures."

The question of the production of the "raps" by the muscular action of the "mediums" is not, however, thus easily disposed of. The report published by Prof. Austin Flint (then of Buffalo, now of New York) and his coadjutors, Drs. Coventry and Lee, after a careful examination of the conditions under which the Rochester rappings occurred, not only proves that they *could be*, but gives strong evidence that they *were*, so produced by the sisters Fox. And when, in April, 1859, Prof. Schiff demonstrated in his own person, to the French Academy of Medicine, one of the several modes in which these sounds can not only be called forth, but caused to seem either near or remote, three of the most eminent surgeons in Paris, MM. Jobert de Lamballe, Cloquet, and Velpeau, stated that they had patients who could produce sounds more or less similar, in different joints. It is, therefore, no "theory," but a well-attested fact, that the voluntary muscular contractions of individuals who have trained themselves to the trick can produce an exact imitation of the sounds affirmed by Mrs. Kate Fox Jencken to be "echoes from an unseen world."

I may refer those who wish to acquaint themselves with the history of the Rochester rappings to the fourth volume of M. Louis Figuier's "Histoire du Merveilleux dans les Temps Modernes" (1861), in which Prof. Austin Flint's report and the proceedings in the French Academy of Medicine are given in full.

WILLIAM B. CARPENTER.

letters and pointer carefully concealed from her, but the

to become a medium. The whole secret was revealed to

APPENDIX O.

LETTER FROM MR. A. R. WALLACE TO THE EDITOR OF THE 'SPECTATOR,' DEC. 23, 1876.

Sir,—In your comment on Mr. Lewes's letter you seem to imply that the experiment described may prove imposture, but that Professor De Morgan's experiment was equally decisive against imposture. Will you allow me very briefly to point out that the alleged exposure proves nothing without assuming the very fact at issue—that Mrs. Hayden herself caused the raps following the indications given by the person who pointed to the letters of the alphabet? For let us assume, on the other hand, that the raps were, as alleged, caused by invisible beings, perhaps not superior in intelligence to Mrs. Hayden, and equally liable to be affected by insult or impulse, and that these beings could read, *more or less imperfectly*, the questioner's mind. Nonsense questions were asked these intelligences, and absurd or contradictory answers were *sought to be obtained* by dwelling on certain letters. These absurd answers were obtained. Tl is is consistent with the supposition on two theories. Either the intelligence could read only the questioner's active desire for a certain answer while pointing to the letters, and accordingly gave that answer; or, if it were able also to perceive the question (though less vivid in the questioner's mind at the moment), it might well adopt the human principles of answering what would be impertinent questions in the only way they deserved an answer. It is a fact within my own knowledge, and it is well-known to all spiritualists, that both kinds of answers are obtained in private circles where any imposture is out of the question. Professor De Morgan's experiment on the other hand absolutely precluded imposture on Mrs. Hayden's part, since not only were the letters and pointer carefully concealed from her, but the

answer, though correct, was in words which the Professor was not expecting. The one experiment was purely negative and inconclusive, the other positive; and I cannot understand how so logical a mind as that of Mr. G. H. Lewes can put the two results even in the category, much less allow the negative evidence to prevail.—I am, Sir, &c.,

ALFRED R. WALLACE.

APPENDIX P.

"We were requested by a lady who had known Mr. Foster in America, to accompany her and her son-in-law (an eminent London Physician) on a visit to Mr. Foster, who had arrived in London only a few days previously. We were not introduced to him by name, and we do not think that he could have had any opportunity of knowing our person. Nevertheless, he not only answered, in a variety of modes, the questions we put to him respecting the time and cause of the death of several of our departed friends and relatives, whose names we had written down on slips of paper which had been folded-up and crumpled into pellets before being placed in his hands; but he brought out names and dates correctly, in large red letters, on his bare arm, the redness being produced by the turgescence of the minute vessels of the skin, and passing away after a few minutes, like a blush. We must own to have been strongly impressed at the time by this performance; but on subsequently thinking it over, we could see that Mr. Foster's divining power was probably derived from his having acquired the faculty of interpreting the movements of the *top* of a pen or pencil, though the *point* and what was written by it was hid from his sight, with the aid of an observing power sharpened by practice, which enabled him to guide his own movements

by the indications unconsciously given by ourselves of the answers we expected. For though we were fully armed with the knowledge which had been acquired of the source from which Mrs. Hayden drew her inspiration, and did our utmost to repress every sign of anticipation, we came, on reflection, to an assured conviction that Mr. Foster *had* been keen-sighted enough to detect such signs, notwithstanding our attempt to baffle him. For, having asked him the *month* of the death of a friend, whose name had previously appeared in red letters on his arm, and the *year* of whose death had also been correctly indicated in another way, he desired us to take up the alphabet-card and to point to the successive letters. This we did, *as we believe*, with pendulum-like regularity; nevertheless, distinct raps were heard at the letters J, U. When, however, on the next repetition, we came to L, M, N, Mr. Foster was obviously baffled. He directed us to try-back two or three times, and at last confessed that he could not certainly tell whether the month was *June* or *July*. The secret of this was, that *we did not ourselves recollect.*

"Wishing to clear up the matter further, we called on Mr. Foster, revealed ourselves to him *in propriâ personâ*, and asked him if he would object to meet a few scientific investigators, who should be allowed to subject his powers to fair tests. As he professed his readiness to do so, we brought together such a meeting at our own house; and previously to Mr. Foster's arrival, we explained to our friends the arrangements we proposed. One of these was, that one of the party should sit outside the 'circle,' and should devote himself to observing and recording all that passed, without taking any part whatever in the performance. Another was, that instead of writing down names on slips of paper, whilst sitting at the table within Mr. Foster's view, we should write them at a side-table, with our backs turned to him. On explaining these arrangements to Mr. Foster, he

immediately said that the first could not be permitted, for that every person present *must* form part of the circle. To the second he made no objection. After handing him our slips of paper carefully folded-up, we took our seats at the table, and waited for the announcement of spiritual visitors. The only one, however, who presented himself during an hour's *séance*, was the spirit of our own old master, whose name Mr. Foster might very readily have learned previously, but about whom he could give no particulars whatever. *Not one of the names written on the papers was revealed.*

"The patience of our friends being exhausted, they took their leave; but as Mr. Foster's carriage had been ordered for a later hour, we requested him to sit down again with the members of our own family. 'Now,' we said, 'that these incredulous philosophers are gone, perhaps the spirits will favour us with a visit.' We purposely followed *his* lead, as on our first interview, and everything went on as successfully as on that occasion; until, whilst the name of a relative we had recently lost was being spelled out on our alphabet-card, *the raps suddenly ceased* on the interposition of a large music-book, which was set-up at a preconcerted signal so as to hide the *top* as well as the bottom of our pointer from Mr. Foster's eyes. Nothing could more conclusively prove that Mr. Foster's knowledge was derived from observation of the movements of the pointer, although he could only see the portion of it not hidden by the card, which was so held as to conceal the lower part of it; and nothing could be a better illustration of the principle of 'unconscious ideo-motor action,' then the fact, that *whilst we were most carefully abstaining from any pause or look from which he might derive guidance, we had enabled him to divine the answer we expected.* The trick by which the red letters were produced was discovered by the inquiries of our medical friends."—(*Quarterly Review*, October 1871, p. 332.)

APPENDIX Q.

MR. BRAID ON THE INFLUENCE OF SUGGESTION AND EXPECTANCY.

"The most curious and important fact of all, however, is this,—that by engendering a state of mental concentration, by a simple act of sustained attention, fixed upon some unexciting and empty thing,—'for poverty of object engenders abstraction,'—the faculties of the minds of *some* patients are thereby thrown out of gear, (*i.e.*, their ordinary relations are changed,) so that the higher faculties—reason, comparison, and will, become dethroned from their supremacy, and give place and power to imagination, (which now careers in unbridled liberty,) easy credulity, and docility or passive obedience; so that, even whilst apparently wide awake, and conscious of all around, they become susceptible of being influenced and controlled entirely by the suggestions of others, upon whom their attention is fixed. In fact, such subjects, are in a sub-hypnotic condition,—in that intermediate state between sleeping and waking, when the mind becomes wavering, the attention off duty, or engrossed with a predominant idea, so that, in reality, the subjects are only half conscious of what is passing around; and their minds, therefore, become easily imposed upon by any suggestion, audibly expressed or visibly exhibited before them. Thus they may be made to perceive, and mistake for realities, whatever mental illusions or ideas are suggested to them. In common parlance they *see* and *feel* AS REAL, and they consider themselves *irresistibly* or *involuntarily fixed, or spell-bound*, or *impelled to perform whatever may be said or signified by the other party upon whom their attention has become involuntarily and vividly riveted*, until a new idea has been suggested, by which the spell is broken, and the subject is left in a condition again to be subjugated and controlled by other suggestions of his tem-

porary fascinator. This is just similar to what we see occurring to anyone spontaneously engaged in deep abstraction, who is instantaneously aroused to consciousness of all around by a tap on the shoulder, or by a word sharply addressed to him.

"It requires considerable tact to manage this, adroitly and successfully, with *some* patients; for the will and belief of certain subjects can only be successfully subjugated and controlled by an earnest and energetic, and confident and authoritative manner, on the part of the operator; such as by his *insisting* that *such* and *such* MUST be the case, according to his audible suggestions, or visible manœuvres for influencing the subjects through the power of sympathy and imitation. I have had ample evidence to convince me of the fact, that, in cases where these waking illusions and delusions could not be excited by giving the suggestions in an apparently doubting tone of voice, or with a hesitating manner, they became quite efficient for the purpose, the instant I assumed a commanding and confident tone of voice and deportment. By these means the *Reason* and *Will* become temporarily paralysed; they lose their freedom of action, through the mind being so much engrossed by the suggested thought, as to allow every idea which has been vividly and energetically addressed to such individual, to assume all the force of present reality,—just as we know to occur spontaneously, in case of *monomania* and *delirium tremens*." (See Braid *On Magic, Witchcraft, Animal Magnetism, Hypnotism, and Electro-Biology*, 1852, pp. 65–67.)

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